



Dual Role Airlift, Fee for Service?

GRADUATE RESEARCH PAPER

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Abstract

This research paper explains the differences of funding and reimbursement between Transportation Working Capital Fund and Operations and Maintenance to Air Mobility Command. Strategic airlift aircraft and dual role aircraft are utilized to move cargo but are reimbursed using different processes and value streams back to the unit providing the cargo airlift.

Dual role aircraft, such as the KC-10, are reimbursed to the Major Command and the Major Command divides the reimbursement funds throughout the Wings. However, strategic airlift aircraft are Transportation Working Capital Fund reimbursed directly back to the Wing that flew the mission. The more airlift missions the strategic airlifters perform, the more they are reimbursed, balancing the cost to operate. Dual role aircraft are resourced by an Operations and Maintenance budget. These tasked units receive a small return on investment as compared to the strategic airlift community.

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I. Introduction

Background, Motivation and Problem Statement

The Department of the Air Force supports our national objectives and interest by using aircraft model/design/series that can perform more than one mission for the Department of Defense. These aircraft are called “dual role” aircraft because they support more than one mission. This study focuses on the aerial refueling tanker and cargo aircraft, specifically the K series (aerial refueling) and the C series (cargo/airlift). The capabilities are combined with the designation of KC. Currently, the Air Force has a total force of 546 KC-135s and 59 KC-10s. A large acquisition of newer KC designated aircraft is ongoing.

Strategic airlift requirements are funded on an as required basis and are assigned and reimbursed through a United States Transportation Command fund called the Transportation Working Capital Fund. As each unit supports the United States Transportation Command required missions, the unit is reimbursed with the cost associated with the airlift mission (HQ AMC/FMA, 2006). However, with Operational and Maintenance, dual role aircraft mission cost is reimbursed back to the Major Command that supported the requirements and then divided among the Major Command wings. The different methods of funding cause dual role aircraft units flying airlift missions to publish and charge differing cost per flying mile charges to customers requesting airlift. Resolve of these differences is the researcher’s motivation to perform this study. Thus, “How should Air Mobility Command fund dual role aircraft performing airlift missions to meet United States Transportation Command requirements?”

The focus of this research is on the funding of dual role aircraft performing airlift missions. Funding for these capabilities is provided through the Planned, Programmed, Budget and Execution (PPBE) process performed by the Department of Defense. This process provides

the ways and means to resource the support provided to our Department of Defense and international partners (SAF/FMB, 2005). Some Air Force wings have dual role mission aircraft. Wings are provided an Operational and Maintenance or Transportation Working Capital Fund budget to operate and support the assigned Designed Operational Capability (DOC), or mission. How aircraft are funded is based on who "owns and financed" the aircraft. For example, active duty C-5s and Air Mobility Command C-17s are owned and financed by Transportation Working Capital Fund. Other active duty and Air Reserve Command C-17s and C-5s are not owned and financed by Transportation Working Capital Fund and therefore owned by Air Force and financed with Operational and Maintenance funding. Operational and Maintenance funding is used by dual role wings for operating and support cost of the assigned mission (SAF/FMB, 2006). Dual role wings operate on a budget approved by congress and must project an amount of planned flying hours required to maintain training and assigned missions with the primary mission being aerial refueling and the secondary mission being airlift.

RESEARCH OBJECTIVES AND RESEARCH QUESTION

The research will focus on the dual role KC-10 aircraft community by equitable funding apportionment as compared to their strategic airlift partners with respect to United States Transportation Command reimbursement and a standard cost per flying hour charge to customers. Dual role aircraft communities will not have to rely on Operations and Maintenance funds with Transportation Working Capital Fund reimbursements to maintain designed operational capability statement commitments.

Objectives

The researcher attempts to recommend policy changes to normalize pricing to customers as a fee for service without regard to how the aircraft was owned and financed from command to

command. This would enable the publishing of a standard cost for flying hour price offered to customers regardless of finance options associated with the aircraft.

Research Question

Research Question: **How should Air Mobility Command fund dual role KC-10 aircraft performing airlift missions to meet United States Transportation Command requirements? “A fee for service.”**

Research Questions

To focus this study, four specific investigative questions were developed and must be researched and answered. These investigative questions are scrutinized and detailed in order to flush out the best recommendations for Air Mobility Command.

1. Should AMC fund dual role aircraft performing airlift missions the same as single role aircraft performing airlift missions?
2. Are two different payment processes used for airlift mission reimbursement fairly distributed?
3. Does the TWCF reimbursement get disseminated back to dual role units performing the airlift mission for each respective Wing?
4. Should TWCF be used for dual role aircraft performing airlift missions, providing a cost apportionment by AMC in support of USTC, used in support of KC sustainment?

Research Focus

The research focuses on KC-10 aircraft performing airlift missions and financed under the Operation and Maintenance budget rules. Options of a fee for service charging system to Department of Defense customers with a standard pricing model will be explored regardless of aircraft purchasing models within the Air Force financing rules and execution.

Methodology

The methodology performed in this project is primarily a quantitative analysis of amount of airlift tasked by United States Transportation Command using dual role aircraft. Data gathered from actual KC-10 airlift missions from fiscal year 2008 through fiscal year 2009 is used (1 October 2008 through 30 September 2010). The missions in the study are performed by the 305th Air Mobility Wing, Joint-Base McGuire/Dix/Lakehurst, New Jersey. Background information and research will be provided through a literature review and examination of current Air Force funding policies. Information and data gathered from past studies will be collected and used to support any applicable areas of research. The current cost processes was analyzed to determine if dual role aircraft can be cost shared through Transportation Working Capital Fund and Operations and Maintenance resourcing. (SAF/FMB, 2005).

The data used for this research is collected and gathered daily by the 618th Air and Space Operations Center (AOC), Business Data Analysis Division, Scott AFB, Illinois and uses the data collection system known as Global Decision Support System 2. The study focuses on two primary missions of the KC-10 aircraft at the 305th Air Mobility Wing, the channel missions and special assignment air missions. These two types of missions were chosen because they are primarily airlift missions. Channel missions are worldwide strategic channel airlift operations for passenger and cargo movement in the Defense Transportation System. Special Assignment Airlift Missions meets Air Force customer requirements for movement of passengers and cargo in support of National Command Authority-directed classified programs, nuclear airlift, fighter and bomber deployment and employment air refueling, and distinguished visitor airlift.

Data group 1 is a 2008 fiscal year data group view of channel and Special Assignment Airlift Missions flown per month (Appendix A: Fiscal Year 2008 KC-10 Channel and SAAM

Cargo Cost). This data will be analyzed to determine the variance of operational tempo of airlift missions flown by dual role aircraft. Data group 2 is a 2009 fiscal year data group view of channel and Special Assignment Airlift Missions with an additional column of fiscal years 2008 and 2009 combined (D2).

Limitations

Assumptions are made for the scope of this project. It is assumed that all data collected from 618th Air and Space Operations Center is accurate and has been validated by 618th Air and Space Operations Center as usable information for the research. Additionally, it is assumed that all current flying hour costs used for all data sets are assigned and published in AFI11-2KC-135V3, AFI11-2KC-10V3, AMCI11-206, and AMCI11-208. It is assumed that all Centralized Asset Management processes are released in accordance with Air Force Material Command instructions and Department of Defense disbursement policies (HQ AFMC/CAM, 2009). Finally, it is assumed that the United States Transportation Command Transportation Working Capital Fund processes are accurate and exercised in accordance with all applicable directives.

This study addresses the overall research question and is limited to the dual role aircraft Transportation Working Capital Fund reimbursement processes. This study is limited to the dual role aircraft community performing airlift missions from a 2-fiscal year time frame from 1 October 2008 through 30 September 2010, specifically, all KC-10 (aerial refueling and cargo) designated model design series (MDS) assigned to McGuire Air Force Base, New Jersey. The reimbursement process is limited to the current Air Force instructions and Department of Defense policies for funding as they exist in fiscal year 2010.

II. Literature Review

Background of Transportation Working Capital Fund

The National Security Act of 1947 established the independent Department of the Air Force and today's current military construct. Since 1947, the act has been amended to meet requirements of current national security strategies. Title IV, Section 405 of the National Security Act of 1947 amended 10 United States Code 2208 authorized the Department of Defense to finance certain commercial type activities or services performed by the Department of Defense or its agencies through the use of industrial funds. These funds are collected from potential customers who receive products or services from the Department of Defense and cover the full cost or reimbursement of the products or services. One of the services offered as the Distribution Process Owner from Transportation Command is the establishment of Transportation Working Capital Fund (HQ AMC/FMA, 2006).

The Secretary of Defense amended the National Security Act of 1947 on September 17, 1957. This amendment created the Airlift Service Industrial Fund with the Secretary of the Air Force as the centralized manager and the Mobility Airlift Commander as the primary responsible party for all airlift functions. When the Air Force was reorganized in 1992, the United States Transportation Command was established and all global defense transportation were aligned under one functional command. The three supporting transportation commands include Air Mobility Command, Surface Deployment and Distribution Command and the Military Sealift Command. The finances and funding for all of these commands were aligned and centralized to create the Defense Business Operating Fund. The Defense Business Operating Fund was renamed as the Defense Working Capital Fund on December 11, 1996 by the Under Secretary of Defense Decision Paper. The decision was to create individual working capital funds for the

various Defense Departments. The Transportation Working Capital Fund is a subset of the Defense Working Capital Fund. United States Transportation Command is the single manager for all Department of Defense transportation funding.

The Transportation Working Capital Fund is not subject to apportionment and allotment controls. The operating budget is generated from the revenue it receives from the services provided to other service departments and national requirements. The revenue or reimbursement for the type of transportation provided is received from charging tariff rates to customers based on the transportation mode requirement. The tariff rates are published once a year by United States Transportation Command. These rates are published in the Air Mobility Command Rate Guide, US Government Airlift Rates and Non-US Government Airlift Rates. Table 1 lists the current aircraft per hour rates when the aircraft is used for its primary role for Department of Defense customers. (HQ AMC/FMA, 2008)

Table 1. United States Transportation Command Transportation Working Capital Fund (TWCF) Rate Aircraft Cost Per Flying Hour (USTC/FM 2011).

FY 2011 Cost Per Flying Hour	
Aircraft Type	Cost Per Flying Hour
C-130	\$7,788
C-17	\$13,767
C-5	\$30,167
KC-10	\$15,940
KC-135	\$12,533

Airlift Services do not recoup all direct and indirect costs. Air Mobility Command Instruction 65-602 has established a cost and reimbursement directive to be able to charge Department of Defense users while maintaining training, operations and maintenance

requirements for the airlift function of the Transportation Command. The margin of difference in funding of airlift service is paid for by an Air Force Operations and Maintenance Readiness Account. A partial list of services refunded by the Transportation Working Capital Fund:

1. Pay of Civilians coded to TWCF
2. AMC Base level Maintenance by contract
3. Aviation Petroleum Oil and Lubricants issued to TWCF assigned aircraft
4. Supplies and Materials (from aircraft parts to office décor)
5. Commercial Augmentation Costs (carriers hired to carry passengers or cargo)
6. Facility Maintenance and Repair
7. Travel, Per Diem, and Other Incidental costs of Temporary Duty
8. Contract Civil Engineering Refuse Collection, Disposal, Ground & Custodial Services
9. Leases and Rentals
10. Operating Equipment
11. Services from Depot Management Activity Group
12. General and Administrative Costs (reimburses Operations and Maintenance Fund for its fair share of common base support costs)



Figure1. KC-10 Air Refueling an F-16 (Air Mobility Command PA, 2008)

Tanker aircraft, KC-10 and KC-135, fly various types of Transportation Working Capital Funded missions. Budget and funding for tanker aircraft are through normal Air Force budgeting Operations and Maintenance funds referred to as 3400 funds. The KC-10 (see Figure 1), can fly dedicated cargo missions that are reimbursed through the Transportation Working Capital Fund (HQ AMC/FMA, 2006). The main revenue sources for the Transportation Working Capital Fund are:

1. Passenger air movements on a space required basis through the regularly scheduled military airlift (channel) system
2. Cargo air movements on a space required basis through the channel system
3. Air movement of Military Mail
4. Special Assignment Airlift Missions. (These are unique customer designated missions that are flown to destinations that are not supported by the normal channel system.)

5. Airlift missions flown in support of Chairman of the Joint Chiefs of Staff Exercises
6. Joint Airborne and Air Transportability Training
7. Associate Reserve (Training) Program
8. Crew Proficiency Training Test and Ferry
9. Readiness Costs
10. Contingency
11. Other (Miscellaneous) Revenue
12. Strategic Aeromedical Evacuation

Transportation Working Capital Fund costs that are not paid for by revenue generating customers are paid to the Transportation Working Capital Fund by the Air Force for the services it receives to include items 7-9 above. Above items 1-5 listed are missions the KC-10 are currently performing. The Air Force can ensure the Transportation Working Capital Fund always has the same amount of money coming in as it has going out and the financial books are balanced. (HQ AMC/FMA, 2006).

Channel and Special Assignment Airlift Mission Rates are published by the United States Transportation Command for Department of Defense customers for planning and budgeting purposes. Rates are reviewed yearly and based on a fiscal year cycle. The Office of Under Secretary of Defense Comptroller directs Air Mobility Command cargo rates be commercially comparable. Commercial competition awareness is a factor and rates are set \$0.01 below the competitive rate. (USTC/FM, 2011)

For Channel Cargo, Air Mobility Command charges on a per pound basis. Each country is assigned to a regional zone and rates are compared to historical pricing rates. The following rules are used: (USTC/FM, 2011)

1. Rates are priced \$0.01 per pound lower than existing commercial competition (commercial tenders)
2. Rates vary by weight break (1-439; 440-1099; 1100-2199; 2200-3599; 3600+)
3. There is a \$1 per pound minimum rate for all routes to help recover fixed costs
4. There is also a minimum shipment weight billed of 10 pounds per cubic foot and a minimum charge of \$25 per shipment to recover fixed costs

For Special Assignment Airlift Mission, Air Mobility Command bills military aircraft on a per-flying hour basis. Military aircraft charges are computed using the actual flying hours or minimum activity rate used to perform the mission multiplied by the applicable flying hour rate, less any extra flying time for maintenance or weather diverts when not at the users request. Customers only pay for the Special Assignment Airlift Mission, no other accessorial fees apply for Transportation Working Capital Fund organic airlift. Chargeable flying hours include the required flying hours to position the aircraft, each customer directed stop and the flying hours to the de-positioning point. Air Mobility Command bills International Commercial Special Assignment Airlift Missions on a seat-per-ton mile rate basis. Charges are computed using contracted miles (active and positioning/de-positioning) times contracted allowable cabin load times applicable seat-per-ton mile rate plus 10% administrative costs. Miscellaneous contracted charges, such as stop charges, euro control fees and cancellation charges, are billed at cost. An incentive discount is offered for both military and commercial aircraft which will reduce the overall bill by 10% if customers meet the following criteria: 1) USTRANSCOM/TCJ3-OS

validates a request more than 30 days prior to the operating date of the mission; 2) The user does not request significant changes 30 days prior to the original requested operating date and 3) Domestic charter missions are billed at contract cost plus an administrative service charge and are not eligible for the incentive discount. (USTC/FM, 2011)

When units are tasked with missions, Transportation Working Capital Fund will add a 3% reimbursement to the unit performing the mission in addition to the above mentioned coverage. This 3% add-on is designed to capture cost that the reimbursement policy might have overlooked. (USTC/FM, 2011)

However fair the rates try to be, the rates are commercially benchmarked and do not recover the full cost to the Transportation Working Capital Fund. The Air Force funds the difference between the total Transportation Working Capital Fund cost and total commercially benchmarked revenue. Transportation Working Capital Fund does not retain the difference between the Department of Defense rate and other rates. The intent of the law is to preclude augmenting appropriations. The balancing of fairness and policy is difficult and is constrained to many laws and directives. The primary governing guidance for rates are:

1. Economy Act (Title 31, United States Code, sections 1535 and 1536)
2. Arms Export and Control Act (Title 22, United States Code, section 2761)
3. Acquisition and Cross Servicing Agreements and Cooperative Military Airlift Agreements (Title 10, United States Code, sections 2342 and 2350c) and international agreements concluded pursuant to these statutes
4. DOD Financial Management Regulation (FMR) volume 4, chapter 3, paragraph 302, "Definitions"
5. DOD FMR volume 11A, chapter 1, paragraph 0102, subparagraph G, "Asset Use Charge" and paragraph 010203, "General Rules for Determining Amounts to be

Reimbursed.”, Addendum 1, “Appropriated Funds Cross Reference of Pricing Elements by Types of Sales.”

6. DOD FMR volume 11B, chapter 11, paragraph 110109, “Billing Standard.”, Annex 1, “DWCF Costing Elements by Types of Sales.”

Background of Centralized Asset Management

The Air Force used to support and sustain its fleet by decentralized funding, supply chain and manpower. Inefficiencies existed in duplication of support and command as well as increased inventory, financial management systems and oversight, costing the Air Force more than \$12 billion a year to sustain and maintain its fleet. Air Force Materiel Command proposed a Centralized Asset Management system that consolidates and streamlines budgeting and spending, normally decentralized to each operational unit. This system streamlines programming, budgeting and execution of sustainment and management of the service's aircraft, helicopters, missiles and munitions and provides a fleet-wide perspective and an enterprise perspective for Air Force officials.

The Centralized Asset Management financial and acquisition system allows the Air Force to approach budgets for parts, depot maintenance, sustainment, training manuals and fuel from an enterprise perspective gaining economies of scale for weapons systems and efficient fleet support. Chief of the Centralized Asset Management division in AFMC's Logistics Directorate, Deborah Naguy, added:

This will give us more insight into problems and more flexibility to fix them. For example, we'd be able to see when F-15s -- not just those at one base but F-15s all across the Air Force -- are experiencing systemic problems that must be addressed to maintain the Air Force's war-fighting capabilities. That's the fleet-wide perspective we may have missed when individual commands were supporting only their portions of a fleet. We'll also be looking across our fleets, so when F-16s and F-15s, for example, have competing

requirements which exceed available funding, we'll be able to articulate the capability impacts of financing one requirement over the other. We'll then provide that information to help senior leaders determine how to prioritize our resources and make the best overall decision for the Air Force. That's the enterprise-wide perspective. The neat thing about all of this is that this whole process will be completely transparent to Airmen in the base repair shop. They'll still go to the same window to order parts. They'll still use the same 'credit card' when they refuel the airplane. Only now, AFMC will be managing the money transfer instead of each separate command. That will save process time and man-hours for the Air Force. (Rumple, HQ AFMC/PA 2007)

As the implemented Centralized Asset Management for Air Force Materiel Command, program managers are responsible for the sustainment and support of their assigned weapon system. The program managers are empowered to determine the most cost effective process and budgeting to devise the best mix of heavy maintenance, engineering analysis, supply chain management and support to meet the requirements of the operational and training missions.

Other areas of centralization include logistics support, sustaining engineering, technical data and fuel funding. Weapons system support systems also have fallen in line with the Centralized Asset Management reorganization. For instance, depot maintenance, spare parts and aircraft support equipment have all transitioned to a centralized management account. This centralization for active duty has also moved to the Guard and Reserve financing.

The centralization of the weapon systems, financing and support aspects are all under a large umbrella of Expeditionary Logistics for the 21st Century, often referred to as eLog21. This is a campaign to move all Air Force logistics processes under one overview to improve end to end sustainment across the enterprise. (HQ AFMC/CAM, 2009)

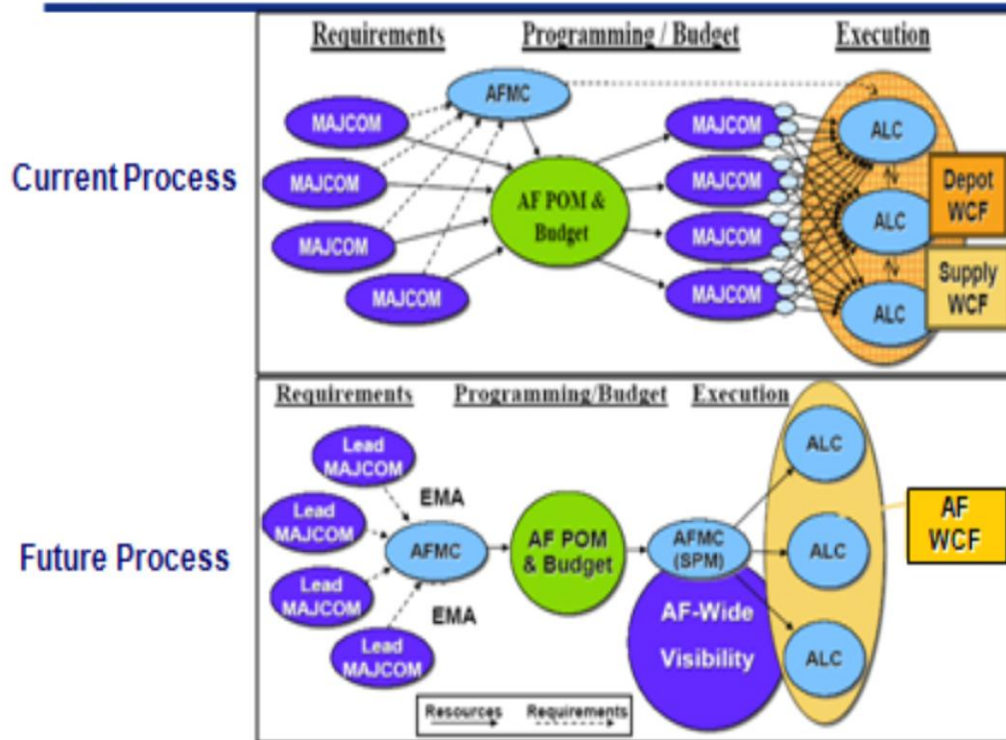
This Air Force logistics transformation has promised many advantages and more lean execution of funding and process. By providing more streamlined requirements, programming and budgeting, and execution flow, Centralized Asset Management will: (HQ AFMC/CAM, 2009)

1. Provide enterprise management of weapon system sustainment
2. Eliminate base requirements to track and fund DLRs and DPEMs (Engine Shops)
3. Eliminate MAJCOM requirement for Execution of DLRs and DPEMs
4. Centralize execution at AFMC
5. Lead MAJCOM submits operations requirements to AFMC
6. Assist AFMC build AF POM (Weapons System Sustainment: CLS, TOs, AVPOL, DLRs, DPEM, Sustaining Engineering, Support Equipment, Flying Hour Consumables)
7. Eliminate hundreds of checkbooks and reduce the millions of transactions that are required under today's antiquated business rules
8. Provide a single enterprise-wide process
9. Provide a single Air Force Working Capital Fund—no separation between Supply and Depot (Merges Depot and Supply Working Capital Funds)
10. Provide a True Common Operating Picture - everyone can see how AFMC is spending the money and supporting the MAJCOMs

Many advantages of the Centralized Asset Management exist as the eLog21 transition takes shape. Advantages are noticed when compared to the prior process (see Figure 2).



CAM Streamlining



Enterprise management of weapons systems sustainment

Integrity - Service - Excellence

Figure2. Centralized Asset Management Explanation (HQ AFMC/CAM, 2009)

III. Methodology

Data Sources

The research focused on the airlift performance of dual role KC-10 aircraft. There are fifty nine assigned KC-10 aircraft located at Travis Air Force Base, California and Joint Base McGuire/Dix/Lakehurst, New Jersey. The KC-10s located at the 305th Air Mobility Wing were chosen for the study due to close proximity to the unit and access to the data collection professionals at the 305th Operational Support Squadron, Current Operations KC-10 Cell. More specifically, the study narrowed the data by extrapolating pure airlift missions flown by KC-10 aircraft assigned to Joint Base McGuire/Dix/Lakehurst, New Jersey. The mission types that met these parameters best are the channel and Special Assignment Airlift Missions.

The data used for this research was collected and gathered daily by the 618th Air and Space Operations Center; Business Data Analysis Division, Scott Air Force Base, Illinois. The base level data collected from the unit Current Operations was verified by a second source as it was vetted through 618th Air and Space Operations Center. This data was extrapolated from the Global Decision Support System 2 based on mission identification numbers and mission type from 1 October 2008 through 30 September 2010 (See Appendix C: Fiscal Year 2008-2009 Airlift Data). The data collected include:

1. Model/design/series
2. Tasked unit
3. Mission identification
4. Sortie identification
5. Mission type
6. Departure location

7. Departure estimated time
8. Total cargo
9. Total passengers.

Policy directives were gathered from Department of Defense, Federal Transportation Directives, United States Transportation Command, Air Force and Air Mobility Command instructions and policies.

Data Format

Data group 1 is a 2008 fiscal year data group view of channel and Special Assignment Airlift Missions flown per month (Appendix A: Fiscal Year 2008 KC-10 Channel and SAAM Cargo Cost). Data group 2 is a 2009 fiscal year data group view of channel and Special Assignment Airlift Missions with an additional column of fiscal years 2008 and 2009 combined.

The data sets include a two year monthly view of:

1. Total number of channel hours flown
2. Total number of Special Assignment Airlift Missions hours flown
3. Total number of channel missions
4. Total number of Special Assignment Airlift Missions
5. Combined total missions flown
6. Total fleet hours flown
7. Monthly utilization rates
8. Total sorties flown
9. Total worldwide departures
10. Aircraft availability rates

Data Analysis

This data was analyzed to determine the variance of operational tempo of airlift missions flown by dual role aircraft. The data sets were compared and analyzed for distribution and apportionment, utilization rates as compared to aircraft availability, comparison of amount of channel mission and Special Assignment Airlift Missions and comparison of United States Transportation Command funded missions percentage compared to all departures.

The data was analyzed to determine if the dual role aircraft can be cost shared through Transportation Working Capital Fund and Operations and Maintenance resourcing by using a new pricing method or to leave as it currently exists.

Assumptions and Limitations

In order to keep the scope of this project narrow and manageable, a number of assumptions were made. It was assumed that all data collected from 618th Air and Space Operations Center is current and accurate and is validated by TACC as usable information for this research. Additionally, it was assumed that all current airlift cargo prices published in the United States Transportation Command Transportation Working Capital Fund Rate Procedures - Fiscal Year 2011 are accurate and accepted for all data set groups. Finally, it was assumed that all Centralized Asset Management processes and all Transportation Working Capital Fund process are accurate and exercised.

This research addressed the overall research question and was limited to the dual role aircraft Transportation Working Capital Fund reimbursement processes. Certain limitations existed within this research. This research was limited to the dual role aircraft community performing airlift missions from a 2-fiscal year time frame, specifically, all KC designated model design series (MDS). The scope of the data was limited to a 2-fiscal year time frame from 1

October 2008 through 30 September 2010. The reimbursement process was limited to the current Air Force instructions and Department of Defense policies for funding as they exist in fiscal year 2010.

IV. Results

Implications

The data identified a steady increase of tasked airlift channel missions over the 2-fiscal year time frame. Special Assignment Airlift Missions remained relatively unchanged with a slight trended average increase with no significant impact. During the same time frame, channel airlift missions increased 67% from October 2008 to September 2010. This was found by the equation of $[(140/84)-1]*100$. The number 140 was the trended average of channel hours flown divided by 84, the trended average of channel hours flown in October 2008 (see Figure 3).

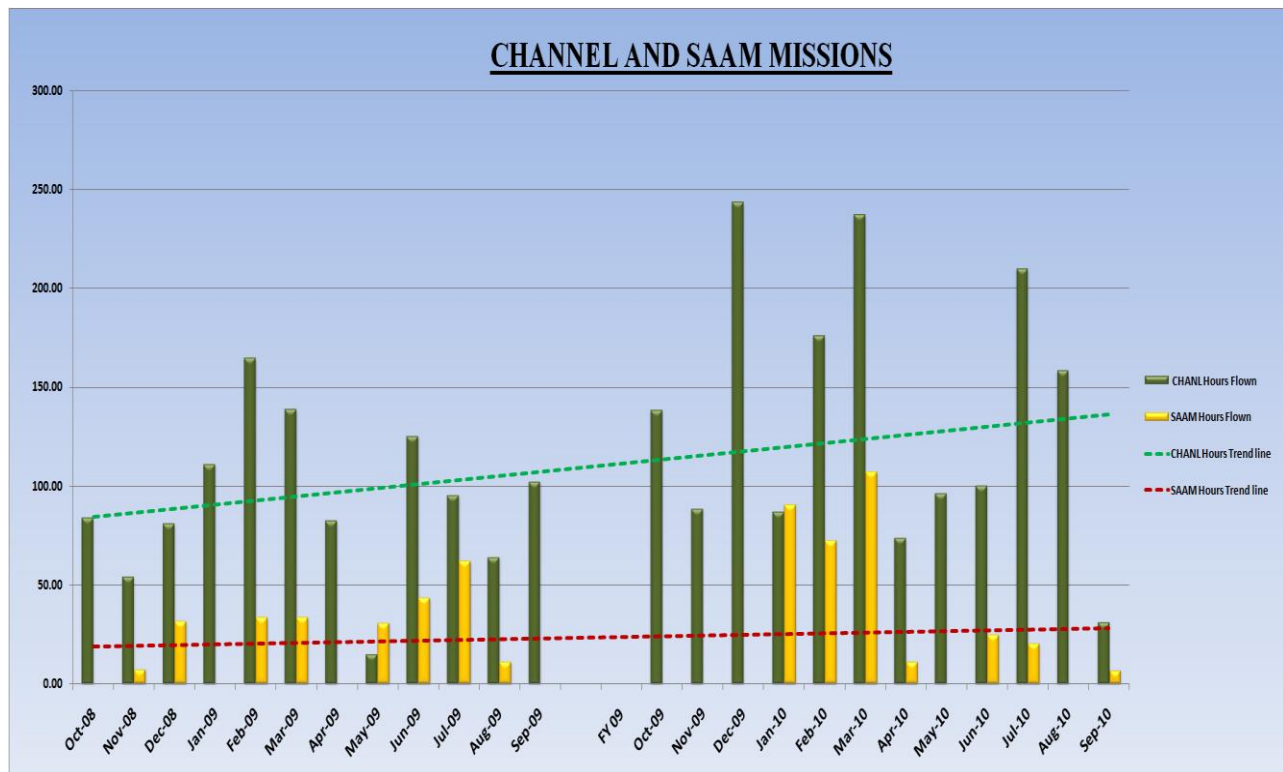


Figure 3. Comparison of Channel and SAAM

The data was compared by total channel hours flown to overall total KC-10 hours flown for FY08 and FY09 (See Table 2). This determined that airlift channel missions hours accounted for 3.53% of all KC-10 missions hours flown and when added with the total Special Assignment Airlift Missions hours

flown (0.75%) the total airlift only missions hours accounted for 4.28% of overall KC-10 missions. The same comparison of KC-10 missions accounted for 4.89% of total missions, not just hours. This comparison showed that roughly 5% of hours flown and 5% of missions were solely airlift missions tasked by United States Transportation Command and Air Mobility Command. This provided additional airlift capacity to Department of Defense customers. When compared to worldwide missions departures, KC-10 airlift channels missions accounted for 9.25% of KC-10 worldwide departures.

Table 2. KC-10 Mission Data Comparison of FY08 and FY09 (GDSS2, retrieved December 2010).

KC-10 Mission Data Comparisons for FY 08 and FY 09		
Data Comparisons	Data from FY 08 and FY 09	Percentages
Total Channel Hours Flown/Total Mission Hours Flown	2760/78193	3.53%
Total SAAM Hours Flown/Total Mission Hours Flown	587/78193	0.75%
Total SAAM and Channel Hours Flown/Total Mission Hours Flown	3347/78193	4.28%
Total # of Channel Missions/Total # of KC-10 Missions	497/12541	3.96%
Total # of SAAM Missions/Total # of KC-10 Missions	117/12541	0.93%
Total # of Channel and SAAM Missions/Total # of KC-10 Missions	615/12541	4.89%
Total # of Worldwide Departures/Total # of Channel Missions	497/5374	9.25%
Use Rate Average FY 08 and FY 09	2801.67/24	116.74 hours per acft

The increased use of KC-10s for its secondary role as an airlifter has increased the Utilization Rates of the KC-10 fleet (see Figure 4). Air Mobility Command uses the aircraft Use Rate as the primary indicator for fleet assessment. As the Use Rates increased, the aircraft availability has decreased (Figure 5). Other measured metrics and calculations are demonstrated in Figure 4.

Definition

Formula

Use Rate, Daily (Hourly Use). Average number of flying hours per average possessed aircraft per day.	$\frac{\text{Total hours flown}}{\text{(Average possessed aircraft days in the month)}}$
Use Rate, Monthly (Hourly Use). Average number of flying hours per average possessed aircraft per month.	$\frac{\text{Total hours flown}}{\text{Average possessed aircraft}}$
Use Rate, Monthly (Sortie Use). Average number of departures or sorties flown per average possessed aircraft for a month.	$\frac{\text{Total sorties}}{\text{Average possessed aircraft}}$
Utilization Rate, Daily (Hourly UTE). Average number of flying hours per primary aircraft inventory (PAI) per day.	$\frac{\text{Total hours flown}}{\text{(PAI days in the month)}}$
Utilization Rate, Monthly (Hourly UTE). Average number of flying hours per (PAI) per month.	$\frac{\text{Total hours flown}}{\text{PAI}}$

Figure 4. Use Rate and Utilization Rate Formulas (HQ AMC/A4, 2008).

This increased use and utilization increased (see Figure 4) the aircraft fleet wear and tear driving up the amount of maintenance and delayed discrepancies. These relationships are inversely proportional and limit the total aircraft availability to aerial refueling and airlift options for the KC-10 fleet. The KC-10 aircraft Use Rate average of fiscal year 2008 and fiscal year 2009 is 117 hours (See Table 2). Aircraft Use Rates have climbed as high as 128 hours for October 2009 (see Appendix A), 131.5 hours for October 2009, and 129.6 hours for May 2010 (see Appendix B). The Use Rate can increase as other aircraft are grounded for maintenance and training. Thus, the remaining aircraft will have to fly the scheduled sorties. These increased Use Rates also accelerate the programmed depot schedule input for each aircraft, again dropping the availability of fleet aircraft. The increased Use Rates leave little time for scheduled maintenance

repair times and phased maintenance repairs. Unscheduled maintenance increases when the fleet is used above the programmed and projected flying schedule.

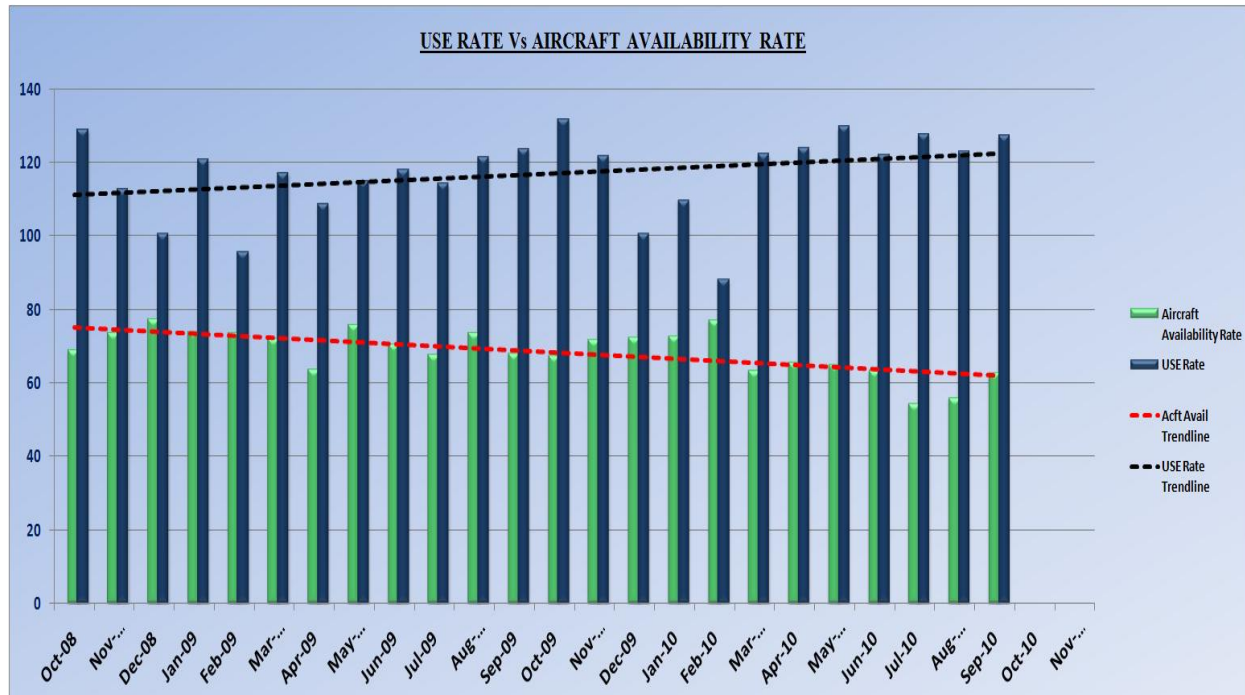


Figure 5. Use Rate versus Aircraft Availability Rate

Aircraft availability is the amount of aircraft available to execute the flying schedule after broken aircraft, training aircraft, off-station aircraft and depot aircraft are subtracted from the 32 Primary Aircraft Assigned. An Aircraft Availability Rate paints a picture of local fleet uses and challenges encountered by under- or over-tasked units. KC-10 Aircraft Availability Rates dropped as low as 63% in April 2009 and 67% in July and September 2009 (See Appendix A) and as low as 54% July 2010 and 55% August 2010 (see Appendix B). During these same times, a high use rate and high demand for channel missions overlapped.

The purely airlift missions accounted for 4.28% of the total KC-10 hours flown and funded by Air Mobility Command as requested from United States Transportation Command.

Special Assignment Airlift Missions accounted for 18% (or 587.4 hours) of the KC-10 airlift missions and channel mission accounted for 82% (or 2760.6 hours) of the KC-10 airlift missions. (see Table 2 and Figure 6)

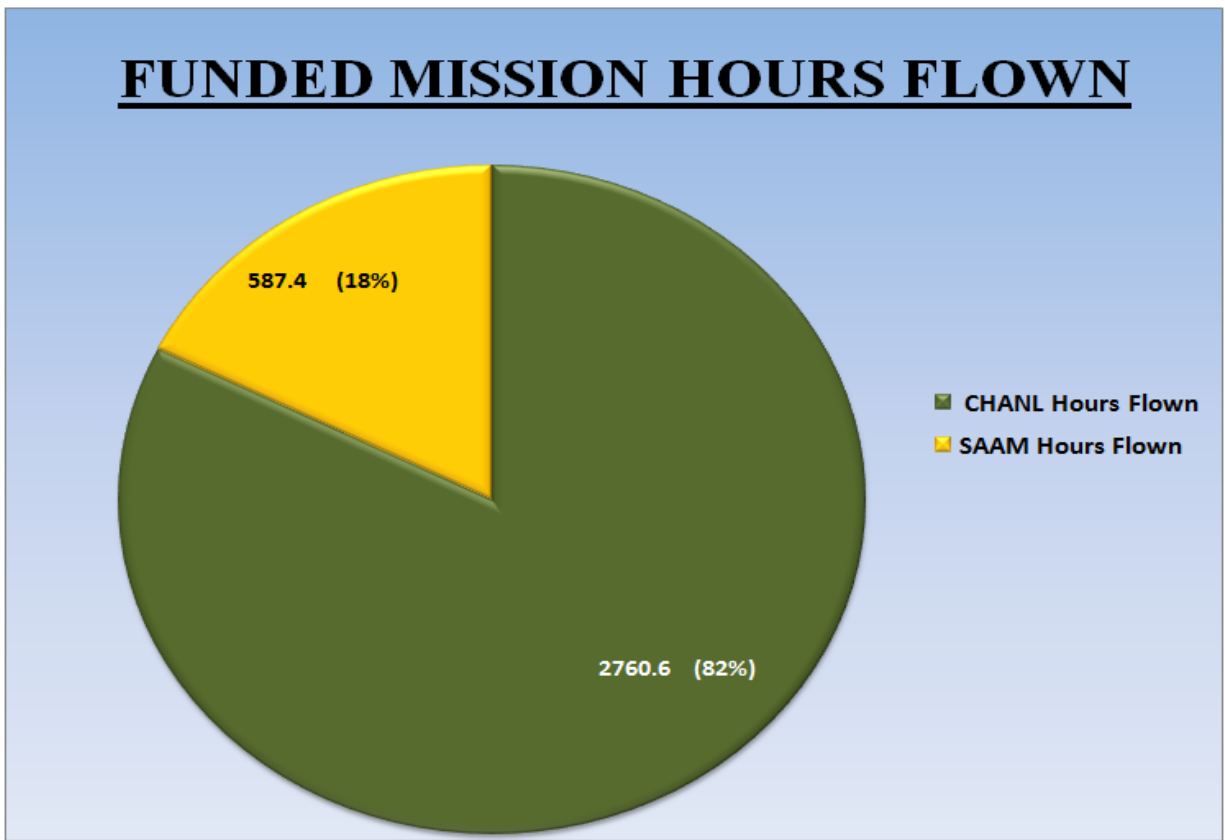


Figure 6. KC-10 Purely Airlift Funded Missions Hours Flown

Research Questions Answered

The overarching research objective of this study was to examine the question of: **“How should Air Mobility Command fund dual role aircraft performing airlift missions to meet United States Transportation Command requirements?” “A Fee for Service. ”**

In order to evaluate the study, the following investigative questions were evaluated:

Q1. How should Air Mobility Command fund dual role aircraft performing airlift missions to meet United States Transportation Command requirements?

How an aircraft is funded is based on who owns the aircraft. For example, Active Duty C-5s and AMC C-17s are owned by Transportation Working Capital Fund and financed by Transportation Working Capital Fund. Other active duty and Air Reserve Command C-17s and C-5s are not owned by Transportation Working Capital Fund but owned by Air Force and therefore financed with Operations and Maintenance funding and budgeting. Dual role aircraft are normally tankers. These aircraft are Operations and Maintenance funded like other non-Transportation Working Capital Funded aircraft. Thus, appropriated funding is received to support aerial fueling missions. If the tasking would become airlift missions then the customer would require tanker funding be transferred to pay the airlift bill. Since tankers can also carry passengers and cargo, a mission becomes Transportation Working Capital Funded if the primary purpose of the mission is to transport passengers and/or cargo. In the KC-10 airlift case, Transportation Working Capital Fund reimburses for the aircraft flying hour costs to the Air Reserve Command or Centralized Asset Management funding and charges the customer to recover any costs back into the Transportation Working Capital Fund. If the primary purpose of the mission is aerial refueling, then Transportation Working Capital Funding is not involved and any incidental passenger or cargo is transported free of charge.

The current process has an incentive program that offers a discount for both military and commercial aircraft which will reduce the overall bill by 10% if customers meet the following criteria: 1) USTRANSCOM/TCJ3-OS validates a request more than 30 days prior to the operating date of the mission; 2) The user does not request significant changes 30 days prior to the original requested operating date and 3) Domestic charter missions are billed at contract cost

plus an administrative service charge and are not eligible for the incentive discount. (USTC/FM, 2011)

Q2. Why are two different payment processes used for airlift mission reimbursement?

The missions are tasked to units through the United States Transportation Command to Air Mobility Command. The Air Mobility Command conduit for tasking the individual units is through the 618th Air and Space Operations Center, Scott Air Force Base, Illinois.

The Global Operations Division (XOO) evenly distributes mission task based on a subset of rules that take into account operations tempo, crew availability, aircraft availability, current unit operations, upcoming events, scheduling availability and fleet and unit fairness of amount of workload being tasked. The Aircraft Tasking (XOB), commonly referred to as the barrel, is the tasking office to the units based on aircraft and crew availability. Based on which unit type gets tasked, whether it is Air Guard Command, Air Force Reserve Command or Active Duty, will determine the payment type. The payment type would depend whether if the unit and aircraft were financed through Operations and Maintenance or Transportation Working Capital Funded. When the units are not Transportation Working Capital Funded, the Transportation Working Capital Fund reimbursement rules would apply to the Centralized Asset Management fund with payment to the Major Command and reimbursement to the unit that performed the mission.

Q3. How does the TWCF reimbursement get disseminated back to the unit?

Centralized Asset Management pays active duty wing tanker flying hour costs through the Operations and Maintenance budgeting process. Transportation Working Capital Fund reimburses 3% for temporary duty and other incidental costs like landing fees. The Wing incurs no expense associated with Transportation Working Capital Funded missions and does not receive reimbursements. When the Air Force directed centralization of the Flying Hour

Program, the Wings no longer incurred expenses with the exception of a 3% charge that Headquarters Air Mobility Command manages and distributes. The additional 3% added is the process to capture any miscellaneous or additional cost to the unit that was not directly captured through the reimbursement rules discussed earlier. The reimbursement funds are transferred and released back to the unit/squadron/wing budget analyst through the Major Command Financial Management offices and distributed according to Air Mobility Command Instruction 65-602, Transportation Capital Working Fund Guidance and Procedures.

Q4. Should Transportation Working Capital Fund be used for dual role aircraft performing airlift missions, providing a cost apportionment by Air Mobility Command in support of United States Transportation Command requirements?

Transportation Working Capital Fund reimburses Air Mobility Command when tankers are tasked by United States Transportation Command. The KC-10 is not a Transportation Working Capital Fund procured aircraft and receives no direct sustainment funding. The KC-10 is financed and budgeted by Operations and Maintenance processes and adheres to the Centralized Asset Management concept of operations.

However, five percent of KC-10 missions are airlift only and reimbursed by Transportation Working Capital Fund. Transportation Working Capital Fund credit for channel and Special Assignment Airlift Mission will help ensure sustainment of the KC-10 fleet, as well as future variants of a dual role tanker. The KC-10 and future buy KC-X (see Figure 7) are not only dual role but also multi role as well with the added mission of aeromedical evacuation. Additional Transportation Working Capital Funding will add flexibility for future mission expansion and as the aerial refueling role decreases and additional airlift and aeromedical mission sets increase.

KC-10 sustainment for the future, as well as procurement for the KC-X will be costly to the nation's defense budgeting and American taxpayers. Allowing a percentage of the KC-10 sustainment to be paid for by Transportation Working Capital Fund based on actual Transportation Working Capital Fund missions flown will help with fleet sustainment over the next 25 years or longer.

V. Conclusions and Recommendations

This section addresses the research questions posed by the study, provides a summary of research conclusions, and recommends future research considerations for exploration.

The newly procured KC-X is designed as a multi-role platform and will be eligible for Transportation Working Capital Funding. The KC-X will shoulder the majority of tanker operations for the next foreseeable decade amidst KC-135/KC-X transition. By developing rules and payment streams for the KC-10 now, Air Mobility Command may garner Transportation Working Capital Fund eligibility for future operations as the mission types move into other areas.

Differences between airlift rates do exist. Department of Defense rates are commercially benchmarked and do not recover the full cost of the Transportation Working Capital Fund. Air Force funds the difference between the total Transportation Working Capital Fund cost and total commercially-benchmarked revenue. (USTC/FM, 2011)

Non-Department of Defense United States government rates differ as well. Public Law (Economy Act) requires recoupment of costs to the Department of Defense. This includes all costs incurred by Transportation Working Capital Fund, as noted above, as well as military personnel costs, which are not incurred by Transportation Working Capital Fund.



Figure 7. KC-X (Defensetech, 2011)

For non United States government rates, public law, Arms Export and Control Act, requires recoupment of the same costs as in the Non-Department of Defense rate, plus certain civilian labor costs, fringe benefit costs for unfunded civilian retirement, post-retirement health benefit and post-retirement life insurance costs, and an asset use charge. (USTC/FM, 2011)

Other laws and acts that affect rates and charges must be addressed before streamlining a process that is understood by customers and easily managed by budgeting.

Course of Action and Recommendations

The KC-10 and future KC-X replacement aircraft will continue to move airlift cargo around the world. As the missions of refueling decreases, the airlift mission will increase. Recommendations and course of actions are discussed.

COA 1: Common Pricing and Payment for Cargo – Fee for Service

Recommendation: Keep current policy of \$.01 cost below current market price, but reimburse to unit performing mission with common payment rules regardless of acquisition of aircraft type. When the unit is tasked to fly an airlift mission, utilize Transportation Working Capital Fund to allocate cost directly back to respective unit budget office.

Cargo movement, regardless of mode, is the service desired. Transportation selection and cost is an indirect cost associated with the mobility of a customer's desired requirement. Similar to civilian cargo movers, the customer has no interest in the transportation mode but is interested in the final price and time of the cargo delivery. If the customer requests a quick delivery with little planning, the price is adjusted. If the requirement is a sustained and predictable delivery, planning can promote a cheaper price by scheduling a cheaper transportation mode. The customer has the option to pay for the type of service required.

COA 2: Funding Process Awareness

Recommendation: Provide media and storyboards outlining the process to all users and support agencies with contact numbers for further explanation.

Customers and operators of the airlift system have to navigate through cumbersome finance and transportation regulations. A general awareness of the financial process for cost and payment to users, operators and units supporting the modes of transportation can help the airlift community plan, understand and operate within the regulatory guidelines. Though most of the cost is reimbursed to the major command through the Transportation Working Capital Fund, this reimbursement is divided through different channels and processes in order to get funding back to the specific transportation provider. This requires various derivative financial systems to each department, major commands and sub-commands. The reimbursement process can lag in the KC-10 community and is divided among all base agencies where the aircraft is assigned.

COA 3: Streamline Laws and Regulatory Requirements

Recommendation: Develop working groups to gather policy directives into one location with a guide that can direct users for easy use and reference.

Some regulatory requirements and laws discussed could use common processes for finance, funding, reimbursement and information technology. Many fiscal Department of Defense constraints require joint basing, proving the need for joint processes and common working systems for not only finance but also real property, functional support areas, budgeting and management.

COA 4: Implement Budget Saving Incentives for On-time Mission Success

Recommendation: Develop performance based policy that will provide price savings per on-time mission or overall mission accomplishment.

During mission execution, the mission is flown to planning standards but has no incentive for the operating crew to meet mission required delivery dates. Policy incentives that will provide a percentage of reimbursement of the mission cost back to the unit flying the mission as well as the requesting customer will promote efficiency and effectiveness. This will motivate the users and the operators to plan the detailed mission requirements more accurately. A proactive approach to mission savings can be achieved by providing incentives to the crew for on-time mission execution with the possibility of garnering savings reimbursement back to the unit and the original requesting customer.

Currently the Depot Level Repairable Program offers a savings incentive refunded to the unit if the asset is returned to the repair cycle within the asset turn-in time parameters. This program is called The Financial Credit For Customer Returns. If Selected customer materiel returns to the retail supply system may result in the award of financial credit to the customer. The amount of financial credit awarded is generally based upon the type and condition of the materiel being returned, and whether there is an anticipated future need for the item. The reimbursement goes back to the unit to be used at the Commander's discretion. Another example is the incentive program for fuel savings where units have decreased aircraft fuel burn rates by decreasing unnecessary weight from the aircraft. The savings is then returned back to the Commander for unit discretionary spending. These incentives motivate the user and the operators to be efficient and meet mission objectives. (AFMAN 23-110, April 2009)

COA 5: Develop Efficient Budgeting Incentives

Recommendation: Review and adjust policy to offer a portion of under-budget success back to the unit for discretionary spending and with no following year budget decrease disincentive.

At present, units strive to meet budgets knowing that if they operate efficiently and save money that the unit will not have a lower budget in the following year. This promotes units to operate to the budget and not to strive for savings. A policy change that will reward units for under-budget victory by providing a percentage back to the unit for discretionary spending and no penalties or budget decrease for following year budget projections

Future Research Considerations

Additional research is recommended with emphasis on increased mission area funding, consolidation of finance systems and processes, funding streamlines and KC acquisition options. The KC-10 and KC-X mission area requirements are expanding into command and control, aeromedical evacuation and many other planned modifications to add to its capability.

Conclusion

As war requirements for aerial refueling decreases, KC-10 and KC-X aircraft will be used in airlift mission areas. The airlift portions account for 5% of all missions and is projected to increase. Better understanding of the Operations and Maintenance and Transportation Working Capital Fund finance, disbursement and reimbursement will clarify the operational increases among the KC-10 operating and maintenance community as well as the customers. Clear and easily understood pricing to customers for all mobility airlift aircraft can assist and facilitate competitive and continued business. (Air Mobility Master Plan, 2010)

Appendix A: Fiscal Year 2008 KC-10 Channel and SAAM Cargo Data

FY 08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09
CHANL Hours Flown	83.98	54.32	80.95	111.05	164.68	139.13	82.90	15.12	125.40	95.53	64.08	102.43
SAAM Hours Flown	0.00	7.42	31.93	0.00	33.52	33.65	0.00	30.85	43.48	61.93	11.17	0.00
No. of CHANEL Missions	19	8	12	15	23	23	12	2	18	14	10	17
No. of SAMM Missions	0	4	6	0	5	5	0	5	7	11	2	0
SAAM/CHANNEL Combined	19	12	18	15	28	28	12	7	25	25	12	17
Total Fleet Hours Flown	3115.5	3438.5	3149.5	3014.2	3476.9	2934.4	3487.5	3126.7	3446.5	3415.7	3420.9	3602.9
USE Rate	128.8	112.5	100.5	120.7	95.6	117.0	108.6	114.9	117.8	114.0	121.3	123.6
Total Sorties Flown	562	468	464	518	454	567	498	561	570	579	588	549
Total WW Departures	241	262	262	231	195	290	213	251	222	219	204	184
	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09
Aircraft Availability Rate	68.71597782	73.55512153	77.16985887	73.73193884	73.4468006	71.90146169	63.31423611	75.55485551	70.17881944	67.63524866	73.5437668	67.77083333
USE Rate	128.8	112.5	100.5	120.7	95.6	117.0	108.6	114.9	117.8	114.0	121.3	123.6

**Appendix B: Fiscal Year 2009 KC-10 Channel and SAAM Cargo Data and
Fiscal Year 2008-2009 Totals**

FY 09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	FY 08-10 Total
CHANL Hours Flown	138.50	88.33	243.63	86.92	176.02	237.25	73.65	96.58	100.52	210.17	158.33	31.13	2760.62
SAAM Hours Flown	0.00	0.00	0.00	90.35	72.27	107.05	11.42	0.00	25.05	20.42	0.00	6.98	587.48
No. of CHANEL Missions	23	16	42	18	45	46	14	17	18	44	33	8	497
No. of SAAM Missions	0	0	0	17	16	24	2	0	4	4	0	5	117
SAAM/CHANNEL Combined	23	16	42	35	61	70	16	17	22	48	33	13	614
Total Fleet Hours Flown	3486.9	3682.8	3507.4	2920.3	3227.2	2539.5	3052.2	3301.6	3320	3097	3323.5	3105.6	78193.20
USE Rate	131.5	121.8	100.4	109.6	87.9	122.2	123.8	129.6	122.0	127.5	122.9	127.2	2801.67
Total Sorties Flown	578	526	443	494	423	525	540	515	502	570	552	495	12541.00
Total WW Departures	234	198	163	231	191	228	180	257	229	227	244	218	5374
	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	
Aircraft Availability Rate	67.24210349	71.57942708	72.03713038	72.56468414	76.9252232	63.16154234	65.28515625	64.67153898	63.17317708	54.06544019	55.7867103	62.47352431	
USE Rate	131.5	121.8	100.4	109.6	87.9	122.2	123.8	129.6	122.0	127.5	122.9	127.2	

Appendix C: Fiscal Year 2008-2009 Airlift Data

MDS	TASKED UNIT	MISSION ID	MISSION TYPE	DEPART ICAO	DEPART ESTIM TIME	TOTAL CARGO	TOTAL PAX
KC10A	305AMW	6JW45F30D275	CHANL	KWRI	01 OCT 2008 1400	0.1	2
KC10A	305AMW	6BW45F30D275	CHANL	KNGU	01 OCT 2008 1915	25.1	1
KC10A	305AMW	6BW45F30D275	CHANL	LERT	02 OCT 2008 2215	25.4	7
KC10A	305AMW	6BW45F30D275	CHANL	LICZ	03 OCT 2008 2100	15.8	1
KC10A	305AMW	6BW45F40D279	CHANL	OBBI	05 OCT 2008 0345	6.8	1
KC10A	305AMW	6BW45F40D279	CHANL	LERT	06 OCT 2008 0645	7.2	4
KC10A	305AMW	6VW45F40D280	CHANL	KNGU	06 OCT 2008 1715		
KC10A	305AMW	6JW45F30D289	CHANL	KWRI	15 OCT 2008 1400	2.5	3
KC10A	305AMW	6BW45F30D289	CHANL	KNGU	15 OCT 2008 1920	22	8
KC10A	305AMW	6BW45F30D289	CHANL	LERT	17 OCT 2008 0250	17.7	2
KC10A	305AMW	6BW45F30D289	CHANL	LICZ	18 OCT 2008 0130	16.3	1
KC10A	305AMW	6BW45F40D292	CHANL	OBBI	18 OCT 2008 0900	6.7	
KC10A	305AMW	6BW45F40D292	CHANL	LERT	19 OCT 2008 1225	11	8
KC10A	305AMW	6VW45F40D293	CHANL	KNGU	19 OCT 2008 2200	0.5	4
KC10A	305AMW	XJW45F30D303	CHANL	KWRI	29 OCT 2008 1400		
KC10A	305AMW	XBW45F30D303	CHANL	KNGU	29 OCT 2008 1545	28.4	6
KC10A	305AMW	XBW45F30D303	CHANL	LERT	30 OCT 2008 1610	27.3	8
KC10A	305AMW	XBW45F30D303	CHANL	LICZ	31 OCT 2008 1430	28.6	
KC10A	305AMW	XBW45F40D306	CHANL	OBBI	31 OCT 2008 2130	7.9	
KC10A	305AMW	XBW45F40D306	CHANL	LERT	02 NOV 2008 0915	13.8	9
KC10A	305AMW	XVW45F40D307	CHANL	KNGU	02 NOV 2008 2230	0.6	1
KC10A	305AMW	6BB45R30B315	CHANL	KWRI	10 NOV 2008 0100	6.9	8
KC10A	305AMW	6BB45R40B316	CHANL	ETAR	11 NOV 2008 0815	0.2	1
KC10A	305AMW	XBB45R30B322	CHANL	KWRI	17 NOV 2008 0230	9.7	8
KC10A	305AMW	XBB45R40B323	CHANL	ETAR	18 NOV 2008 0845	0.8	3

KC10A	305AMW	6BB45R30B329	CHANL	KWRI	24 NOV 2008 0210	30	
KC10A	305AMW	6BB45R40B330	CHANL	ETAR	25 NOV 2008 0945	11.3	3
KC10A	305AMW	XJM114971311	SAAM	KWRI	06 NOV 2008 2000		
KC10A	305AMW	XAM114971311	SAAM	KBAD	07 NOV 2008 1900		
KC10A	305AMW	XAM114971311	SAAM	KSKF	09 NOV 2008 1900		
KC10A	305AMW	XVM114971311	SAAM	KMGE	09 NOV 2008 2345		
KC10A	305AMW	XBB45R30B336	CHANL	KWRI	01 DEC 2008 0100	6.7	
KC10A	305AMW	XBB45R30B336	CHANL	CYQX	01 DEC 2008 0521		
KC10A	305AMW	XBB45R40B337	CHANL	ETAR	02 DEC 2008 1140		
KC10A	305AMW	6BB45R30B343	CHANL	KWRI	08 DEC 2008 0230	18.8	4
KC10A	305AMW	6BB45R30B343	CHANL	EGUN	09 DEC 2008 0600	0.5	4
KC10A	305AMW	6BB45R40B344	CHANL	ETAR	10 DEC 2008 1000	11.6	10
KC10A	305AMW	XBB45R30B350	CHANL	KWRI	15 DEC 2008 0100	19.4	2
KC10A	305AMW	XBB45R40B351	CHANL	ETAR	16 DEC 2008 0915	0.6	7
KC10A	305AMW	6BB45R30B357	CHANL	KWRI	22 DEC 2008 0100	5	5
KC10A	305AMW	6BB45R40B358	CHANL	ETAR	23 DEC 2008 0900		
KC10A	305AMW	6BB45R30B364	CHANL	KWRI	29 DEC 2008 0145	16.8	10
KC10A	305AMW	6BB45R40B365	CHANL	ETAR	30 DEC 2008 0915	4.1	
KC10A	305AMW	6JM109072339	SAAM	KWRI	04 DEC 2008 0015		
KC10A	305AMW	6AM109072339	SAAM	KADW	04 DEC 2008 2000	15.1	7
KC10A	305AMW	6VM109072339	SAAM	RKSO	06 DEC 2008 0730		
KC10A	305AMW	6VM109072339	SAAM	KTCM	06 DEC 2008 1930		
KC10A	305AMW	6VM109072339	SAAM	KWRI	07 DEC 2008 2000		
KC10A	305AMW	6VM109072339	SAAM	KADW	07 DEC 2008 2209		
KC10A	305AMW	6BB45R30B005	CHANL	KWRI	05 JAN 2009 0100	33.1	8
KC10A	305AMW	6BB45R40B006	CHANL	ETAR	06 JAN 2009 1130	0.8	9
KC10A	305AMW	6BR45Z70B012	CHANL	KWRI	12 JAN 2009 0400	30.5	

KC10A	305AMW	6BR45Z70B012	CHANL	EGUL	13 JAN 2009 1018		
KC10A	305AMW	6BR45Z80B013	CHANL	OAIX	13 JAN 2009 2130		
KC10A	305AMW	6BR45Z80B013	CHANL	LICZ	15 JAN 2009 0645		
KC10A	305AMW	XBR45Z70B019	CHANL	KWRI	21 JAN 2009 0100	0.6	5
KC10A	305AMW	XBR45Z70B019	CHANL	ETAR	22 JAN 2009 0820		
KC10A	305AMW	XBR45Z80B020	CHANL	OAIX	22 JAN 2009 1700		
KC10A	305AMW	XBR45Z80B020	CHANL	LEZG	23 JAN 2009 1910	12.5	
KC10A	305AMW	6BW45G50B026	CHANL	KWRI	26 JAN 2009 0100	32	
KC10A	305AMW	6BW45G50B026	CHANL	ETAR	27 JAN 2009 0945	32	
KC10A	305AMW	6BW45G60B027	CHANL	OKBK	27 JAN 2009 1745	4.8	
KC10A	305AMW	6BW45G60B027	CHANL	LERT	29 JAN 2009 0615	4.8	
KC10A	305AMW	6BR45Z70B031	CHANL	KWRI	31 JAN 2009 0300	28.7	
KC10A	305AMW	6BR45Z70B031	CHANL	ETAR	03 FEB 2009 1315	52.3	8
KC10A	305AMW	6BR45Z80B032	CHANL	OAIX	03 FEB 2009 2317		
KC10A	305AMW	6BR45Z80B032	CHANL	LEMO	05 FEB 2009 0945		
KC10A	305AMW	XBR45Z70B038	CHANL	KWRI	07 FEB 2009 0300	24.7	
KC10A	305AMW	XBR45Z70B038	CHANL	ETAR	08 FEB 2009 1400	24.8	6
KC10A	305AMW	XBR45Z80B039	CHANL	OAIX	09 FEB 2009 0028		
KC10A	305AMW	XBR45Z80B039	CHANL	LEMO	10 FEB 2009 0945		
KC10A	305AMW	6BR45Y50E043	CHANL	KWRI	12 FEB 2009 0200	31.6	
KC10A	305AMW	XBB45R30E043	CHANL	KWRI	12 FEB 2009 0300	23.2	1
KC10A	305AMW	XBB45R40E044	CHANL	ETAR	13 FEB 2009 0900		
KC10A	305AMW	6BR45Y50E043	CHANL	ETAR	13 FEB 2009 1745		
KC10A	305AMW	6BR45Y60E045	CHANL	OTBH	14 FEB 2009 0410	0.5	4
KC10A	305AMW	XBR45Z70B045	CHANL	KWRI	14 FEB 2009 0730	18.7	
KC10A	305AMW	6BR45Y60E045	CHANL	ETAR	15 FEB 2009 1500	6.7	
KC10A	305AMW	XBR45Z70B045	CHANL	ETAR	16 FEB 2009 1400		

KC10A	305AMW	XBR45Z80B046	CHANL	OAIX	16 FEB 2009 2255	7.9	
KC10A	305AMW	XBR45Z80B047	CHANL	UAFM	17 FEB 2009 2100		
KC10A	305AMW	XBR45Z80B049	CHANL	LEMO	19 FEB 2009 0550		
KC10A	305AMW	XBR45Z70B052	CHANL	KWRI	21 FEB 2009 0550	29.7	8
KC10A	305AMW	XBR45Z70B052	CHANL	ETAR	22 FEB 2009 1340	32.3	8
KC10A	305AMW	XBR45Z80B053	CHANL	OAIX	22 FEB 2009 2342		
KC10A	305AMW	XBR45Z80B053	CHANL	LEMO	24 FEB 2009 0800		
KC10A	305AMW	6BR45Z70B059	CHANL	KWRI	28 FEB 2009 0100	27.7	6
KC10A	305AMW	6JM109172044	SAAM	KWRI	13 FEB 2009 1630		
KC10A	305AMW	6AM109172044	SAAM	KADW	14 FEB 2009 1400	0.1	1
KC10A	305AMW	6VM109172044	SAAM	RKSO	16 FEB 2009 0500	0.3	4
KC10A	305AMW	6VM109172044	SAAM	PHIK	16 FEB 2009 1515		
KC10A	305AMW	6VM109172044	SAAM	KADW	17 FEB 2009 1645		
KC10A	305AMW	6BR45Z70B059	CHANL	ETAR	01 MAR 2009 1315	27.8	6
KC10A	305AMW	6BR45Z80B060	CHANL	OAIX	01 MAR 2009 2340		
KC10A	305AMW	6BR45Z80B060	CHANL	LEMO	03 MAR 2009 0945		
KC10A	305AMW	6JR45Z70G066	CHANL	KWRI	07 MAR 2009 0130		
KC10A	305AMW	6BR45Z70G066	CHANL	KDOV	07 MAR 2009 0700		
KC10A	305AMW	6BR45Z70G066	CHANL	ETAD	08 MAR 2009 1315		
KC10A	305AMW	6BR45Z80G067	CHANL	OAIX	08 MAR 2009 2325		
KC10A	305AMW	6BR45Z80G067	CHANL	LICZ	10 MAR 2009 0805	0.3	3
KC10A	305AMW	6JR45Z70G073	CHANL	KWRI	14 MAR 2009 0100		
KC10A	305AMW	6BR45Z70G073	CHANL	KDOV	14 MAR 2009 0530		
KC10A	305AMW	6BR45Z70G073	CHANL	ETAR	15 MAR 2009 1315	33.5	3
KC10A	305AMW	6BR45Z70G073	CHANL	OMAM	16 MAR 2009 1705	33.5	3
KC10A	305AMW	6BR45Z80G074	CHANL	OAIX	16 MAR 2009 2345		
KC10A	305AMW	6BR45Z80G074	CHANL	LEMO	18 MAR 2009 1105		

KC10A	305AMW	XJR45Z70G080	CHANL	KWRI	21 MAR 2009 0230		
KC10A	305AMW	XBR45Z70G080	CHANL	KDOV	21 MAR 2009 0605	26.4	6
KC10A	305AMW	XBR45Z70G080	CHANL	ETAD	22 MAR 2009 1315	52.4	12
KC10A	305AMW	XBR45Z80G081	CHANL	OAIX	22 MAR 2009 2245		
KC10A	305AMW	XBR45Z80G081	CHANL	LEMO	24 MAR 2009 0900		
KC10A	305AMW	XJR45Z70G088	CHANL	KWRI	29 MAR 2009 0015		
KC10A	305AMW	XBR45Z70G088	CHANL	KDOV	29 MAR 2009 0530	21.5	7
KC10A	305AMW	XBR45Z70G088	CHANL	ETAR	30 MAR 2009 1015	24	1
KC10A	305AMW	XBR45Z80G089	CHANL	OAIX	30 MAR 2009 2015		
KC10A	305AMW	XJM109072084	SAAM	KWRI	25 MAR 2009 1915		
KC10A	305AMW	XAM109072084	SAAM	KADW	26 MAR 2009 2245	0.5	5
KC10A	305AMW	XVM109072084	SAAM	RKSO	28 MAR 2009 0915	0.3	3
KC10A	305AMW	XVM109072084	SAAM	PHIK	29 MAR 2009 1800	0.9	10
KC10A	305AMW	XVM109072084	SAAM	KADW	30 MAR 2009 0645	0.2	3
KC10A	305AMW	6JR45Z7XD091	CHANL	KWRI	01 APR 2009 0245		
KC10A	305AMW	XBR45Z80G089	CHANL	LEMO	01 APR 2009 0700		
KC10A	305AMW	6BR45Z7XD091	CHANL	KDOV	01 APR 2009 0715	21.3	4
KC10A	305AMW	6BR45Z7XD091	CHANL	ETAR	02 APR 2009 1300	22.1	9
KC10A	305AMW	6BR45Z8XD092	CHANL	OAIX	02 APR 2009 2315		
KC10A	305AMW	6BR45Z8XD092	CHANL	LEMO	04 APR 2009 0800		
KC10A	305AMW	6BB45R30C104	CHANL	KWRI	14 APR 2009 0100	15.6	12
KC10A	305AMW	6BB45R40C105	CHANL	ETAR	15 APR 2009 0915	1.1	11
KC10A	305AMW	ZBB45R30C111	CHANL	KWRI	21 APR 2009 0400	23.4	
KC10A	305AMW	ZBB45R40C112	CHANL	ETAR	23 APR 2009 0430	8.1	6
KC10A	305AMW	6BB45R30C118	CHANL	KWRI	28 APR 2009 0100	19.1	7
KC10A	305AMW	6BB45R40C119	CHANL	ETAR	29 APR 2009 0915	7.4	3
KC10A	305AMW	XBB45R30C139	CHANL	KWRI	19 MAY 2009 0430		

KC10A	305AMW	XBB45R40C140	CHANL	ETAR	20 MAY 2009 1025	15.8	4
KC10A	305AMW	XJM109072129	SAAM	KWRI	10 MAY 2009 1715	14.3	
KC10A	305AMW	XAM109072129	SAAM	KBKF	11 MAY 2009 1830		
KC10A	305AMW	XVM109072129	SAAM	RKSO	13 MAY 2009 0600		
KC10A	305AMW	XVM109072129	SAAM	PAED	14 MAY 2009 1330	0.6	6
KC10A	305AMW	XVM109072129	SAAM	KADW	14 MAY 2009 2315	0.1	3
KC10A	305AMW	6BB45R30C153	CHANL	KWRI	03 JUN 2009 0100		
KC10A	305AMW	6JC45E50B159	CHANL	KWRI	07 JUN 2009 2315	0.1	1
KC10A	305AMW	6BC45E50B159	CHANL	KSUU	08 JUN 2009 0815		
KC10A	305AMW	6BC45E50B159	CHANL	PHIK	09 JUN 2009 1345	19.4	4
KC10A	305AMW	XBB45R30C160	CHANL	KWRI	10 JUN 2009 0100	19.4	5
KC10A	305AMW	6BB45R40C154	CHANL	ETAR	10 JUN 2009 0515	13	6
KC10A	305AMW	6BC45E60B161	CHANL	YSRI	11 JUN 2009 0045		
KC10A	305AMW	XBB45R40C161	CHANL	ETAR	11 JUN 2009 1200		
KC10A	305AMW	6BC45E60B161	CHANL	PHIK	12 JUN 2009 1115	9.4	7
KC10A	305AMW	6VC45E60B163	CHANL	KSUU	12 JUN 2009 1938		
KC10A	305AMW	6BB45R30C167	CHANL	KWRI	16 JUN 2009 0430		
KC10A	305AMW	6BB45R40C168	CHANL	ETAR	17 JUN 2009 0915		
KC10A	305AMW	6BW45Y50A172	CHANL	KWRI	21 JUN 2009 2300		
KC10A	305AMW	6BW45Y50A172	CHANL	ETAR	23 JUN 2009 1415	10.6	
KC10A	305AMW	6BW45Y60A174	CHANL	OTBH	23 JUN 2009 2345		
KC10A	305AMW	6BW45Y60A174	CHANL	ETAR	25 JUN 2009 0700	5.8	7
KC10A	305AMW	XBB45R30A179	CHANL	KWRI	28 JUN 2009 2345	17.4	4
KC10A	305AMW	XBB45R40A181	CHANL	ETAR	30 JUN 2009 0500	4.2	4
KC10A	305AMW	XJM109072169	SAAM	KWRI	18 JUN 2009 2200		
KC10A	305AMW	XAM109072169	SAAM	KADW	19 JUN 2009 2130	0.6	7
KC10A	305AMW	XVM109072169	SAAM	RKSO	21 JUN 2009 1115		

KC10A	305AMW	XVM109072169	SAAM	PAED	21 JUN 2009 2230	0.9	14
KC10A	305AMW	XVM109072169	SAAM	KADW	22 JUN 2009 2130	0.3	2
KC10A	305AMW	XJM101372174	SAAM	KWRI	23 JUN 2009 2000	3	2
KC10A	305AMW	XAM101372174	SAAM	KSKF	25 JUN 2009 0200		
KC10A	305AMW	6BW45Y50A186	CHANL	KWRI	05 JUL 2009 2330	27.4	7
KC10A	305AMW	6BW45Y50A186	CHANL	ETAR	07 JUL 2009 1400		
KC10A	305AMW	6BW45Y60A188	CHANL	OTBH	08 JUL 2009 0027		
KC10A	305AMW	6BW45Y60A188	CHANL	ETAR	10 JUL 2009 1200		
KC10A	305AMW	XBB45R30A193	CHANL	KWRI	12 JUL 2009 2200	25.5	9
KC10A	305AMW	XBB45R40A195	CHANL	ETAR	14 JUL 2009 0645	15.7	9
KC10A	305AMW	XBW45Y50A200	CHANL	KWRI	19 JUL 2009 2200	26.2	7
KC10A	305AMW	XBW45Y50A200	CHANL	ETAR	21 JUL 2009 2110		
KC10A	305AMW	XBW45Y60A202	CHANL	OTBH	22 JUL 2009 0945	0.7	6
KC10A	305AMW	XBW45Y60A202	CHANL	ETAR	25 JUL 2009 0430	14.4	5
KC10A	305AMW	6BW45Y50A207	CHANL	KWRI	27 JUL 2009 0315	30.5	8
KC10A	305AMW	6BW45Y50A207	CHANL	ETAR	28 JUL 2009 0630	30	2
KC10A	305AMW	6BW45Y60A209	CHANL	OTBH	28 JUL 2009 1515	1.2	
KC10A	305AMW	6BW45Y60A209	CHANL	LERT	29 JUL 2009 2130	1.5	3
KC10A	305AMW	XVM101372174	SAAM	EGUN	07 JUL 2009 0530	5.2	20
KC10A	305AMW	6JM109099188	SAAM	KWRI	07 JUL 2009 1315		
KC10A	305AMW	6JM109099188	SAAM	KADW	07 JUL 2009 2030	14.3	
KC10A	305AMW	XAM109071198	SAAM	KWRI	17 JUL 2009 1745	0.3	4
KC10A	305AMW	XVM109071198	SAAM	RKSO	19 JUL 2009 0527	0.6	11
KC10A	305AMW	XVM109071198	SAAM	PAED	19 JUL 2009 1530	1.4	19
KC10A	305AMW	XVM109071198	SAAM	KADW	20 JUL 2009 0030	0.7	7
KC10A	305AMW	XJM111772209	SAAM	KWRI	28 JUL 2009 0015	1.2	11
KC10A	305AMW	XJM111772209	SAAM	LERT	29 JUL 2009 0245		

KC10A	305AMW	XAM111772209	SAAM	OTBH	29 JUL 2009 1230	4.2	34
KC10A	305AMW	XAM111772209	SAAM	EGUN	30 JUL 2009 1600		
KC10A	305AMW	6BW45Y50A214	CHANL	KWRI	03 AUG 2009 0030	21.7	5
KC10A	305AMW	6BW45Y50A214	CHANL	ETAR	04 AUG 2009 1400	18.3	6
KC10A	305AMW	6BW45Y60A216	CHANL	OTBH	04 AUG 2009 2345		
KC10A	305AMW	6BW45Y60A216	CHANL	ETAR	06 AUG 2009 1915	19.6	6
KC10A	305AMW	6BW45Y50A221	CHANL	KWRI	09 AUG 2009 2300		
KC10A	305AMW	6BW45Y50A221	CHANL	ETAR	12 AUG 2009 0430		
KC10A	305AMW	6BW45Y60A223	CHANL	OTBH	12 AUG 2009 1351	1.2	
KC10A	305AMW	XBB45X10D238	CHANL	KWRI	26 AUG 2009 1000	19.8	
KC10A	305AMW	XBB45X20D238	CHANL	BGTL	26 AUG 2009 1720		
KC10A	305AMW	6BW45Y50A242	CHANL	KWRI	30 AUG 2009 2225	30.8	
KC10A	305AMW	XAM102671215	SAAM	LPLA	03 AUG 2009 1300	30	38
KC10A	305AMW	XVM102671215	SAAM	KSKF	04 AUG 2009 0045		
KC10A	305AMW	6BW45Y50A242	CHANL	ETAR	01 SEP 2009 1457	17.7	2
KC10A	305AMW	6BW45Y60A244	CHANL	OTBH	02 SEP 2009 0007		
KC10A	305AMW	6BW45Y60A244	CHANL	ETAR	03 SEP 2009 0700	6.6	5
KC10A	305AMW	6BB45R30X250	CHANL	KWRI	07 SEP 2009 0230	35.4	
KC10A	305AMW	6BB45R30X250	CHANL	EGUN	07 SEP 2009 1320	10.6	
KC10A	305AMW	6BB45R40X251	CHANL	ETAR	08 SEP 2009 1100	15.2	9
KC10A	305AMW	XBW45Y50B257	CHANL	KWRI	14 SEP 2009 2100	21.5	7
KC10A	305AMW	XBW45Y50B257	CHANL	ETAR	16 SEP 2009 1400	16.2	1
KC10A	305AMW	XBW45Y60B258	CHANL	OTBH	16 SEP 2009 2205	2.9	
KC10A	305AMW	XBW45Y60B258	CHANL	EGUN	17 SEP 2009 2225		
KC10A	305AMW	XBW45Y60B258	CHANL	KDOV	18 SEP 2009 1100		
KC10A	305AMW	6BW45Y50B264	CHANL	KWRI	21 SEP 2009 0100	26.7	2
KC10A	305AMW	6BW45Y50B264	CHANL	ETAR	22 SEP 2009 1045	9.1	

KC10A	305AMW	6BW45Y60B265	CHANL	OTBH	22 SEP 2009 2030		
KC10A	305AMW	6BW45Y50B271	CHANL	KWRI	28 SEP 2009 0300	21.9	4
KC10A	305AMW	6BW45Y50B271	CHANL	ETAR	29 SEP 2009 1045	5.4	1
KC10A	305AMW	6BW45Y60B272	CHANL	OTBH	29 SEP 2009 2030		
KC10A	305AMW	6BW45Y60B272	CHANL	LEMO	01 OCT 2009 0700		
KC10A	305AMW	6BW45Y60B272	CHANL	KACY	02 OCT 2009 0712		
KC10A	305AMW	6BW45Y50B278	CHANL	KWRI	05 OCT 2009 0130		
KC10A	305AMW	6BW45Y50B278	CHANL	ETAR	06 OCT 2009 1100	6.9	
KC10A	305AMW	6BW45Y60B279	CHANL	OTBH	06 OCT 2009 2000		
KC10A	305AMW	6BW45Y60B279	CHANL	LEMO	08 OCT 2009 0700		
KC10A	305AMW	6BW45Y50B284	CHANL	KWRI	11 OCT 2009 0100	14.7	3
KC10A	305AMW	6BW45Y50B284	CHANL	ETAR	12 OCT 2009 0915	7.4	1
KC10A	305AMW	6BW45Y60B285	CHANL	OTBH	12 OCT 2009 1900		
KC10A	305AMW	6BW45Y60B285	CHANL	LEMO	14 OCT 2009 0530		
KC10A	305AMW	6BW45Y50B292	CHANL	KWRI	19 OCT 2009 0100	23.5	3
KC10A	305AMW	6BW45Y50B292	CHANL	EGUN	19 OCT 2009 1120		
KC10A	305AMW	6BW45Y50B292	CHANL	ETAR	20 OCT 2009 1045	12.4	
KC10A	305AMW	6BW45Y60B293	CHANL	OTBH	20 OCT 2009 2030		
KC10A	305AMW	6BW45Y60B293	CHANL	LEMO	22 OCT 2009 0730	7.8	1
KC10A	305AMW	6JR45Q70A297	CHANL	KWRI	24 OCT 2009 2100		
KC10A	305AMW	6BR45Q70A298	CHANL	KNGU	25 OCT 2009 0145	23.6	
KC10A	305AMW	XBB45R30B299	CHANL	KWRI	26 OCT 2009 0100	17.2	10
KC10A	305AMW	XBB45R30B299	CHANL	KWRI	26 OCT 2009 0600	17.2	10
KC10A	305AMW	6BR45Q70A298	CHANL	LICZ	26 OCT 2009 1053	16.4	
KC10A	305AMW	6BR45Q80A299	CHANL	HDAM	26 OCT 2009 1930	0.8	
KC10A	305AMW	XBB45R40B300	CHANL	ETAR	27 OCT 2009 1130	14.7	10
KC10A	305AMW	6BR45Q80A299	CHANL	LERT	28 OCT 2009 0530		

KC10A	305AMW	XBW45Y50B306	CHANL	KWRI	02 NOV 2009 0100	32.8	8
KC10A	305AMW	XBW45Y50B306	CHANL	ETAR	03 NOV 2009 1045	30.5	1
KC10A	305AMW	XBW45Y60B307	CHANL	OTBH	03 NOV 2009 2030	14.1	
KC10A	305AMW	XBW45Y60B307	CHANL	LEMO	05 NOV 2009 0745	14.1	
KC10A	305AMW	6BB45R70B313	CHANL	KWRI	09 NOV 2009 0100	16.4	3
KC10A	305AMW	6BB45R70B313	CHANL	ETAR	10 NOV 2009 0850	15.6	7
KC10A	305AMW	6BB45R80B314	CHANL	EGUN	10 NOV 2009 1700	3	7
KC10A	305AMW	6BW45G50X319	CHANL	KWRI	15 NOV 2009 0115	38.3	3
KC10A	305AMW	6BW45G50X319	CHANL	LERT	16 NOV 2009 0315	38.1	1
KC10A	305AMW	6BB45R30B320	CHANL	KWRI	17 NOV 2009 0100	16.1	
KC10A	305AMW	6BB45R30B320	CHANL	EGUN	17 NOV 2009 0930	11.4	3
KC10A	305AMW	6BB45R40B321	CHANL	ETAR	18 NOV 2009 1100	9	
KC10A	305AMW	6BB45R40B321	CHANL	EGPK	18 NOV 2009 1345		
KC10A	305AMW	XBB45R30B327	CHANL	KWRI	23 NOV 2009 0100	17	3
KC10A	305AMW	XBB45R30B327	CHANL	EGUN	23 NOV 2009 1130		
KC10A	305AMW	XBB45R40B328	CHANL	ETAR	24 NOV 2009 1045	7.1	6
KC10A	305AMW	6JW45F30A340	CHANL	KWRI	06 DEC 2009 0120		
KC10A	305AMW	6BW45F30A340	CHANL	KNGU	06 DEC 2009 0845	23.7	
KC10A	305AMW	XBW45Y50B341	CHANL	KWRI	07 DEC 2009 0100	38.2	3
KC10A	305AMW	XBW45Y50B341	CHANL	ETAR	08 DEC 2009 1130	4.9	1
KC10A	305AMW	6BW45F30A340	CHANL	KWRI	08 DEC 2009 1830	24.2	5
KC10A	305AMW	6BW45F30A340	CHANL	LERT	09 DEC 2009 0345	19.7	
KC10A	305AMW	XBW45Y50B341	CHANL	ETAR	09 DEC 2009 1030	39.1	1
KC10A	305AMW	XBW45Y60B342	CHANL	OTBH	09 DEC 2009 1935	7.8	
KC10A	305AMW	6BW45F30A340	CHANL	LICZ	10 DEC 2009 0510	11.4	1
KC10A	305AMW	6BW45F40A342	CHANL	OBBI	10 DEC 2009 1355	5.2	
KC10A	305AMW	XBW45Y60B342	CHANL	LEMO	11 DEC 2009 0730	7.8	

KC10A	305AMW	6BW45F40A342	CHANL	LICZ	11 DEC 2009 1241	12.4	2
KC10A	305AMW	6BW45F40A342	CHANL	LERT	12 DEC 2009 0940		
KC10A	305AMW	6VW45F40A345	CHANL	KNGU	12 DEC 2009 2040	0.2	3
KC10A	305AMW	6JW45P3XB348	CHANL	KWRI	14 DEC 2009 0001	0.2	2
KC10A	305AMW	6BW45Y50B348	CHANL	KWRI	14 DEC 2009 0300	23.3	1
KC10A	305AMW	6BW45P3XB348	CHANL	KDOV	14 DEC 2009 0330	25.6	6
KC10A	305AMW	6BW45Y50B348	CHANL	ETAR	15 DEC 2009 1710	25.7	
KC10A	305AMW	6BW45P3XB348	CHANL	LERT	15 DEC 2009 1715		
KC10A	305AMW	6BW45P4XB350	CHANL	ORAA	16 DEC 2009 0200		
KC10A	305AMW	6BW45Y60B349	CHANL	OTBH	16 DEC 2009 0220		
KC10A	305AMW	6BW45P4XB350	CHANL	EGUN	17 DEC 2009 0615	9.5	
KC10A	305AMW	6BW45Y60B349	CHANL	LEMO	17 DEC 2009 1318		
KC10A	305AMW	XBW45Y50B355	CHANL	KWRI	22 DEC 2009 0430	30.2	9
KC10A	305AMW	6JR45Z7XB355	CHANL	KWRI	23 DEC 2009 0930		
KC10A	305AMW	XBW45Y50B355	CHANL	ETAR	23 DEC 2009 1245	17.1	
KC10A	305AMW	6BR45Z7XB355	CHANL	KDOV	23 DEC 2009 1335	31.4	4
KC10A	305AMW	XBW45Y60B356	CHANL	OTBH	23 DEC 2009 2145	14.8	
KC10A	305AMW	6JR45Z7XA354	CHANL	KWRI	24 DEC 2009 0520		
KC10A	305AMW	6BR45Z7XA354	CHANL	KDOV	24 DEC 2009 0939	24.9	
KC10A	305AMW	XBW45Y60B356	CHANL	LEMO	25 DEC 2009 0500	15.1	2
KC10A	305AMW	6BR45Z7XA354	CHANL	LEMO	26 DEC 2009 0825	24.9	
KC10A	305AMW	6BR45Z7XB355	CHANL	LEMO	26 DEC 2009 1300	31	
KC10A	305AMW	6BR45Z8XA355	CHANL	OAIX	26 DEC 2009 2240		
KC10A	305AMW	6BR45Z8XB357	CHANL	OAIX	27 DEC 2009 0245		
KC10A	305AMW	6BR45Z8XA355	CHANL	UAFM	27 DEC 2009 2310		
KC10A	305AMW	6BR45Z8XB357	CHANL	OKBK	28 DEC 2009 0050	15.5	
KC10A	305AMW	6BW45Y50B362	CHANL	KWRI	28 DEC 2009 1200	16.6	2

KC10A	305AMW	6BW45Y50B362	CHANL	ETAR	29 DEC 2009 1230	12.7	1
KC10A	305AMW	6BW45Y60B363	CHANL	OTBH	29 DEC 2009 2200		
KC10A	305AMW	6BR45Z8XA355	CHANL	EGUN	30 DEC 2009 1000	19.1	5
KC10A	305AMW	6BW45Y60B363	CHANL	LEMO	31 DEC 2009 1200		
KC10A	305AMW	6BW45Y50B011	CHANL	KWRI	11 JAN 2010 0100	21.7	8
KC10A	305AMW	6BW45Y50B011	CHANL	ETAR	12 JAN 2010 1400		
KC10A	305AMW	6BW45Y60B012	CHANL	OTBH	12 JAN 2010 2327		
KC10A	305AMW	6BW45Y60B012	CHANL	LEMO	14 JAN 2010 0715	0.4	3
KC10A	305AMW	XBW45Y50B025	CHANL	KWRI	25 JAN 2010 0030	22.7	
KC10A	305AMW	XBW45Y50B025	CHANL	KDOV	25 JAN 2010 0430		
KC10A	305AMW	XBW45Y50B025	CHANL	ETAD	25 JAN 2010 1330	22.7	
KC10A	305AMW	6JB45M3HR026	CHANL	KWRI	26 JAN 2010 0001		
KC10A	305AMW	6BB45M3HR026	CHANL	KNGU	26 JAN 2010 1915	34.7	
KC10A	305AMW	6BB45M4HR027	CHANL	MUGM	27 JAN 2010 0045		
KC10A	305AMW	XBW45Y50B025	CHANL	ETAR	27 JAN 2010 0720	21.1	
KC10A	305AMW	XBW45Y60B026	CHANL	OTBH	27 JAN 2010 1525	5.1	
KC10A	305AMW	6BB45M3HR028	CHANL	KNGU	27 JAN 2010 2100	37.4	8
KC10A	305AMW	6BB45M4HR028	CHANL	MUGM	28 JAN 2010 0200		
KC10A	305AMW	6BB45R3XE028	CHANL	KWRI	28 JAN 2010 2230		
KC10A	305AMW	XBW45Y60B026	CHANL	LEMO	29 JAN 2010 0310	3.7	
KC10A	305AMW	6JB45M3HR029	CHANL	KWRI	30 JAN 2010 0150		
KC10A	305AMW	6BB45R4XE030	CHANL	ETAR	30 JAN 2010 1000	6.2	
KC10A	305AMW	6JM20371E013	SAAM	KWRI	13 JAN 2010 0315		
KC10A	305AMW	6JM20371E013	SAAM	PAED	13 JAN 2010 1330		
KC10A	305AMW	6AM20371E013	SAAM	RJTY	15 JAN 2010 0001	14.8	25
KC10A	305AMW	6AM20371E013	SAAM	PWAK	16 JAN 2010 2130		
KC10A	305AMW	6AM20371E013	SAAM	PHNG	19 JAN 2010 1900		

KC10A	305AMW	6JM160301020	SAAM	KWRI	20 JAN 2010 0415		
KC10A	305AMW	6VM20371E013	SAAM	KNLC	20 JAN 2010 0645		
KC10A	305AMW	6AM160301020	SAAM	LIPA	21 JAN 2010 1300	25.3	2
KC10A	305AMW	6JM20372E022	SAAM	KWRI	22 JAN 2010 1730		
KC10A	305AMW	6JM20372E022	SAAM	KSUU	23 JAN 2010 1730		
KC10A	305AMW	6AM160301020	SAAM	LPLA	24 JAN 2010 1401	1.2	12
KC10A	305AMW	6AM20372E022	SAAM	KNLC	24 JAN 2010 2000		
KC10A	305AMW	6VM160301020	SAAM	KVPS	25 JAN 2010 2200		
KC10A	305AMW	6AM20372E022	SAAM	PHNG	26 JAN 2010 2300		
KC10A	305AMW	6AM20372E022	SAAM	PWAK	28 JAN 2010 0100		
KC10A	305AMW	6VM20372E022	SAAM	RJTA	29 JAN 2010 0200		
KC10A	305AMW	6VM20372E022	SAAM	PHIK	30 JAN 2010 0530		
KC10A	305AMW	6BW45Y50B032	CHANL	KWRI	01 FEB 2010 0100	20.8	2
KC10A	305AMW	6BW45Y50B032	CHANL	KDOV	01 FEB 2010 0501	20.8	2
KC10A	305AMW	XJZ45M3HR032	CHANL	KWRI	02 FEB 2010 0015		
KC10A	305AMW	6BB45M3HR030	CHANL	KNGU	02 FEB 2010 0915	47.3	9
KC10A	305AMW	6BB45M4HR030	CHANL	MUGM	02 FEB 2010 1620		
KC10A	305AMW	XBZ45M3HR033	CHANL	KNGU	02 FEB 2010 1800		
KC10A	305AMW	XBZ45M4HR033	CHANL	MUGM	02 FEB 2010 2340		
KC10A	305AMW	6BW45Y50B032	CHANL	ETAR	03 FEB 2010 0900	4.7	
KC10A	305AMW	6BW45Y60B033	CHANL	OTBH	03 FEB 2010 1818	12.5	
KC10A	305AMW	6BB45R3XE035	CHANL	KWRI	04 FEB 2010 0045	21	7
KC10A	305AMW	6BW45Y60B033	CHANL	LEMO	05 FEB 2010 0550	12.5	
KC10A	305AMW	6BB45R4XE036	CHANL	ETAR	05 FEB 2010 1315	12.3	12
KC10A	305AMW	6JZ45M3HR037	CHANL	KWRI	06 FEB 2010 0001		
KC10A	305AMW	6JZ45M3HR037	CHANL	KPSM	07 FEB 2010 1000		
KC10A	305AMW	6BW45Y50B039	CHANL	KWRI	07 FEB 2010 2230	3.6	3

KC10A	305AMW	6BZ45M3HR037	CHANL	KNGU	08 FEB 2010 0600	44.8	2
KC10A	305AMW	6BZ45M4HR038	CHANL	MUGM	08 FEB 2010 1225		
KC10A	305AMW	6BW45Y50B039	CHANL	ETAR	09 FEB 2010 1000	29.3	2
KC10A	305AMW	6BW45Y60B040	CHANL	OTBH	09 FEB 2010 2030		
KC10A	305AMW	6BW45Y60B040	CHANL	LEMO	11 FEB 2010 1000		
KC10A	305AMW	6JZ45M3HR043	CHANL	KWRI	12 FEB 2010 0015		
KC10A	305AMW	6JW45P3XE042	CHANL	KWRI	12 FEB 2010 1700		
KC10A	305AMW	6BZ45M3HR043	CHANL	KNGU	12 FEB 2010 2135	22.4	5
KC10A	305AMW	6BW45P3XE042	CHANL	KDOV	12 FEB 2010 2159	21.8	
KC10A	305AMW	6BZ45M4HR044	CHANL	MUGM	13 FEB 2010 0413		
KC10A	305AMW	6BW45P3XE042	CHANL	LEMO	14 FEB 2010 0505	21.8	
KC10A	305AMW	6BW45P4XE044	CHANL	ORAA	14 FEB 2010 1418	3.4	
KC10A	305AMW	6BW45P4XE044	CHANL	ETAR	15 FEB 2010 1500	38	5
KC10A	305AMW	6JZ45M3HR047	CHANL	KWRI	16 FEB 2010 0015	0.5	4
KC10A	305AMW	6BZ45M3HR047	CHANL	KNGU	17 FEB 2010 1100	23.4	
KC10A	305AMW	6BZ45M4HR048	CHANL	MUGM	17 FEB 2010 1754		
KC10A	305AMW	6JZ45M3HR050	CHANL	KWRI	19 FEB 2010 0015		
KC10A	305AMW	6BZ45M3HR050	CHANL	KNGU	19 FEB 2010 1900	29.3	5
KC10A	305AMW	6BZ45M4HR051	CHANL	MUGM	20 FEB 2010 0230		
KC10A	305AMW	XBB45R30B053	CHANL	KWRI	22 FEB 2010 0130	20.2	7
KC10A	305AMW	XJZ45M3HR054	CHANL	KWRI	22 FEB 2010 2325	0.2	2
KC10A	305AMW	XBB45R40B054	CHANL	ETAR	23 FEB 2010 1030	8.8	
KC10A	305AMW	XBZ45M3HR054	CHANL	KNGU	23 FEB 2010 1930	31	4
KC10A	305AMW	XBZ45M4HR055	CHANL	MUGM	24 FEB 2010 0130		
KC10A	305AMW	XBZ45M4HR055	CHANL	KADW	24 FEB 2010 2130	0.9	8
KC10A	305AMW	6JZ45M3HR056	CHANL	KWRI	25 FEB 2010 0015		
KC10A	305AMW	6BZ45M3HR056	CHANL	KNGU	25 FEB 2010 1930	28.2	4

KC10A	305AMW	6BZ45M4HR057	CHANL	MUGM	26 FEB 2010 0315		
KC10A	305AMW	XBZ45M3HR057	CHANL	KNGU	26 FEB 2010 2340		
KC10A	305AMW	XBZ45M4HR058	CHANL	MUGM	27 FEB 2010 0643		
KC10A	305AMW	XJM16202E035	SAAM	KWRI	04 FEB 2010 0015		
KC10A	305AMW	XJM16202E035	SAAM	KWRI	05 FEB 2010 0015	0.3	3
KC10A	305AMW	6JM173001039	SAAM	KWRI	08 FEB 2010 0100		
KC10A	305AMW	XAM16202E035	SAAM	ETAD	08 FEB 2010 1300		
KC10A	305AMW	XAM16202E035	SAAM	LPLA	09 FEB 2010 1300		
KC10A	305AMW	6AM173001039	SAAM	KHIF	10 FEB 2010 0900		
KC10A	305AMW	6AM173001039	SAAM	LEMO	12 FEB 2010 0501	4.1	28
KC10A	305AMW	XAM16202E035	SAAM	KCEF	12 FEB 2010 1530		
KC10A	305AMW	XVM16202E035	SAAM	KBAD	12 FEB 2010 2239		
KC10A	305AMW	6JM163302052	SAAM	KWRI	21 FEB 2010 1400		
KC10A	305AMW	6AM163302052	SAAM	KPAM	21 FEB 2010 2017		
KC10A	305AMW	6AM163302052	SAAM	KDOV	22 FEB 2010 0140		
KC10A	305AMW	6VM163302052	SAAM	EGUL	23 FEB 2010 0800		
KC10A	305AMW	6JM453501057	SAAM	KBHM	26 FEB 2010 1330		
KC10A	305AMW	6AM453501057	SAAM	KNKT	26 FEB 2010 1835		
KC10A	305AMW	6VM453501057	SAAM	TNCC	28 FEB 2010 1400		
KC10A	305AMW	XBW45Y50B060	CHANL	KWRI	02 MAR 2010 0001	19.8	1
KC10A	305AMW	6JB45M30C061	CHANL	KWRI	02 MAR 2010 0015		
KC10A	305AMW	6BB45M30C061	CHANL	KNGU	02 MAR 2010 1930	25	8
KC10A	305AMW	6BB45M40C062	CHANL	MUGM	03 MAR 2010 0145		
KC10A	305AMW	XBW45Y50B060	CHANL	ETAR	04 MAR 2010 1115	18.8	1
KC10A	305AMW	XJB45M30F063	CHANL	KWRI	04 MAR 2010 1800		
KC10A	305AMW	XBW45Y60B061	CHANL	OTBH	04 MAR 2010 2022		
KC10A	305AMW	XBB45M30F064	CHANL	KNGU	05 MAR 2010 1545	40.7	6

KC10A	305AMW	XBB45M40F064	CHANL	MUGM	05 MAR 2010 2205		
KC10A	305AMW	XBW45Y60B061	CHANL	LEMO	06 MAR 2010 0740	11.3	
KC10A	305AMW	6BW45Y50B067	CHANL	KWRI	08 MAR 2010 0030	33.6	
KC10A	305AMW	6BW45Y50B067	CHANL	ETAD	09 MAR 2010 1000		
KC10A	305AMW	6BW45Y60B068	CHANL	OTBH	09 MAR 2010 2030		
KC10A	305AMW	6JR4537XD069	CHANL	KWRI	10 MAR 2010 2115		
KC10A	305AMW	6BR4537XD070	CHANL	KDOV	11 MAR 2010 0245	25.6	4
KC10A	305AMW	6BW45Y60B068	CHANL	LERT	11 MAR 2010 0800		
KC10A	305AMW	6JB45H1XF071	CHANL	KWRI	12 MAR 2010 0245	0.2	1
KC10A	305AMW	6BR4537XD070	CHANL	ETAD	12 MAR 2010 1536	25.5	2
KC10A	305AMW	6BB45H1XF072	CHANL	KCHS	13 MAR 2010 0955	39.9	
KC10A	305AMW	6BB45H2XF072	CHANL	SKBO	13 MAR 2010 1800		
KC10A	305AMW	6BB45H2XF072	CHANL	TISX	14 MAR 2010 1640		
KC10A	305AMW	6JB45M30F071	CHANL	KWRI	14 MAR 2010 2015		
KC10A	305AMW	6BW45Y50B074	CHANL	KWRI	15 MAR 2010 0330		
KC10A	305AMW	6BW45Y50B074	CHANL	KDOV	15 MAR 2010 0653		
KC10A	305AMW	6BB45M30F071	CHANL	KNGU	15 MAR 2010 1430	19.1	
KC10A	305AMW	6BB45M40F072	CHANL	MUGM	15 MAR 2010 1930		
KC10A	305AMW	6BR4537XD070	CHANL	LTAG	16 MAR 2010 0805	25.5	2
KC10A	305AMW	6BW45Y50B074	CHANL	ETAR	16 MAR 2010 1410		
KC10A	305AMW	6VR4538XD072	CHANL	OAKB	16 MAR 2010 1653		
KC10A	305AMW	6BW45Y60B075	CHANL	OTBH	16 MAR 2010 2240		
KC10A	305AMW	6VR4538XD072	CHANL	LERT	17 MAR 2010 1925	0.1	1
KC10A	305AMW	6BW45Y60B075	CHANL	LEMO	18 MAR 2010 0825		
KC10A	305AMW	XBB45R30B081	CHANL	KWRI	22 MAR 2010 0350	18	4
KC10A	305AMW	XBB45R40B082	CHANL	ETAR	23 MAR 2010 1000	3.2	
KC10A	305AMW	6JC45790D082	CHANL	KWRI	23 MAR 2010 1800	0.4	4

KC10A	305AMW	6BC45790D083	CHANL	KSUU	24 MAR 2010 1840		
KC10A	305AMW	6BC45790D083	CHANL	PHIK	25 MAR 2010 2115	16.4	9
KC10A	305AMW	6BC45790D083	CHANL	PGUA	27 MAR 2010 0300	14.7	8
KC10A	305AMW	6BC45800D086	CHANL	RODN	27 MAR 2010 0920		
KC10A	305AMW	6BC45800D086	CHANL	PGUA	28 MAR 2010 0930	3.1	9
KC10A	305AMW	6BW45Y50B088	CHANL	KWRI	29 MAR 2010 0001	17.6	8
KC10A	305AMW	6BW45Y50B088	CHANL	KDOV	29 MAR 2010 0430	17.6	8
KC10A	305AMW	6BC45800D086	CHANL	PHIK	29 MAR 2010 2100		
KC10A	305AMW	6BW45Y50B088	CHANL	ETAR	30 MAR 2010 1000	17.3	1
KC10A	305AMW	6BW45Y60B089	CHANL	OTBH	30 MAR 2010 1930		
KC10A	305AMW	6VC45800D089	CHANL	KSUU	30 MAR 2010 1945		
KC10A	305AMW	6JM40051E066	SAAM	KWRI	07 MAR 2010 1630		
KC10A	305AMW	6JM17321E067	SAAM	KWRI	08 MAR 2010 1515	0.6	5
KC10A	305AMW	6AM40051E066	SAAM	KNKX	08 MAR 2010 2100	15.9	20
KC10A	305AMW	6AM17321E067	SAAM	KGSB	09 MAR 2010 1130		
KC10A	305AMW	6AM40051E066	SAAM	PHIK	10 MAR 2010 2100	15.9	20
KC10A	305AMW	6AM40051E066	SAAM	PWAK	13 MAR 2010 0100		
KC10A	305AMW	6AM17321E067	SAAM	LEMO	13 MAR 2010 0700	30.6	33
KC10A	305AMW	6VM17321E067	SAAM	OMAM	14 MAR 2010 0905		
KC10A	305AMW	6JM195971073	SAAM	KWRI	14 MAR 2010 1630		
KC10A	305AMW	6AM195971073	SAAM	KADW	15 MAR 2010 1200		
KC10A	305AMW	6VM17321E067	SAAM	EGUN	15 MAR 2010 1310	9.7	2
KC10A	305AMW	6AM195971073	SAAM	KLFI	15 MAR 2010 1615		
KC10A	305AMW	6AM195971073	SAAM	KDMA	16 MAR 2010 1430		
KC10A	305AMW	6AM195971073	SAAM	KBAB	16 MAR 2010 2030		
KC10A	305AMW	6AM195971073	SAAM	KLSV	18 MAR 2010 1530		
KC10A	305AMW	6AM195971073	SAAM	KCOS	19 MAR 2010 1615		

KC10A	305AMW	6VM195971073	SAAM	KADW	19 MAR 2010 2241		
KC10A	305AMW	6JM319871080	SAAM	KWRI	21 MAR 2010 0315		
KC10A	305AMW	6AM319871080	SAAM	MUGM	22 MAR 2010 1130		
KC10A	305AMW	6AM319871080	SAAM	UGTB	23 MAR 2010 0333		
KC10A	305AMW	6VM319871080	SAAM	LSZH	24 MAR 2010 1130		
KC10A	305AMW	6VM319871080	SAAM	MUGM	25 MAR 2010 1530		
KC10A	305AMW	6JM16451E087	SAAM	KWRI	28 MAR 2010 1815		
KC10A	305AMW	6AM16451E087	SAAM	KLSV	30 MAR 2010 1630		
KC10A	305AMW	6BW45Y60B089	CHANL	LEMO	01 APR 2010 0700	0.9	6
KC10A	305AMW	XBW45Y50B095	CHANL	KWRI	05 APR 2010 0400	26.5	4
KC10A	305AMW	XBW45Y50B095	CHANL	ETAR	06 APR 2010 1000	26.1	
KC10A	305AMW	6JB45M30C096	CHANL	KWRI	06 APR 2010 1800		
KC10A	305AMW	XBW45Y60B096	CHANL	OTBH	06 APR 2010 1930		
KC10A	305AMW	6BB45M30C097	CHANL	KNGU	07 APR 2010 1315	13.4	
KC10A	305AMW	6BB45M40C097	CHANL	MUGM	07 APR 2010 1830		
KC10A	305AMW	XBW45Y60B096	CHANL	LEMO	08 APR 2010 0855		
KC10A	305AMW	6BB45R3XA115	CHANL	KWRI	25 APR 2010 0015		
KC10A	305AMW	6BB45R3XA115	CHANL	KDOV	25 APR 2010 0345		
KC10A	305AMW	6BB45R30C117	CHANL	KWRI	27 APR 2010 0200	25.9	8
KC10A	305AMW	6BB45R4XA116	CHANL	ETAR	27 APR 2010 1925	1.1	9
KC10A	305AMW	6BB45R30C117	CHANL	KDOV	27 APR 2010 2100	26	10
KC10A	305AMW	6BB45R40C118	CHANL	ETAR	29 APR 2010 0450	0.4	3
KC10A	305AMW	6AM16451E087	SAAM	LPLA	03 APR 2010 1230		
KC10A	305AMW	6VM16451E087	SAAM	ETAD	04 APR 2010 1200		
KC10A	305AMW	6BW45Y50B123	CHANL	KWRI	03 MAY 2010 0001	22.8	7
KC10A	305AMW	6BW45Y50B123	CHANL	KDOV	03 MAY 2010 0230	22.8	7
KC10A	305AMW	6BW45Y50B123	CHANL	ETAR	05 MAY 2010 0500	8.5	

KC10A	305AMW	6BW45Y60B124	CHANL	OTBH	05 MAY 2010 1330	0.5	4
KC10A	305AMW	6BW45Y60B124	CHANL	ETAR	06 MAY 2010 1305	4.1	9
KC10A	305AMW	XBW45Y50B137	CHANL	KWRI	17 MAY 2010 0001	20.1	
KC10A	305AMW	XBW45Y50B137	CHANL	ETAR	18 MAY 2010 1100	16	
KC10A	305AMW	XBW45Y60B138	CHANL	OTBH	18 MAY 2010 1930		
KC10A	305AMW	XBW45Y60B138	CHANL	LEMO	20 MAY 2010 0515		
KC10A	305AMW	XBW45Y50B144	CHANL	KWRI	24 MAY 2010 0015	19.7	4
KC10A	305AMW	XBW45Y50B144	CHANL	KDOV	24 MAY 2010 0345	20.4	4
KC10A	305AMW	XBW45Y50B144	CHANL	LPLA	25 MAY 2010 0900	20.4	4
KC10A	305AMW	XBW45Y50B144	CHANL	ETAR	26 MAY 2010 1210	12.6	3
KC10A	305AMW	XBW45Y60B145	CHANL	OTBH	26 MAY 2010 2000		
KC10A	305AMW	XBW45Y60B145	CHANL	LEMO	28 MAY 2010 0700		
KC10A	305AMW	6JR45Y7XB151	CHANL	KWRI	31 MAY 2010 0001		
KC10A	305AMW	6BR45Y7XB151	CHANL	KDOV	31 MAY 2010 0445	26.2	3
KC10A	305AMW	6BR45Y7XB151	CHANL	ETAD	01 JUN 2010 1030	25.9	
KC10A	305AMW	6BR45Y8XB152	CHANL	OAKN	01 JUN 2010 2200		
KC10A	305AMW	6BR45Y8XB152	CHANL	ETAR	03 JUN 2010 1115	0.3	5
KC10A	305AMW	6BC45R30B158	CHANL	KWRI	07 JUN 2010 0001	21.3	3
KC10A	305AMW	6BC45R30B158	CHANL	KDOV	07 JUN 2010 0230	21.3	3
KC10A	305AMW	6BC45R40B159	CHANL	ETAR	10 JUN 2010 1430	14.6	
KC10A	305AMW	XBW45Y50B165	CHANL	KWRI	14 JUN 2010 0001	18.7	7
KC10A	305AMW	XBW45Y50B165	CHANL	KDOV	14 JUN 2010 0345	18.6	7
KC10A	305AMW	XBW45Y50B165	CHANL	ETAR	15 JUN 2010 1000	14.6	1
KC10A	305AMW	6BW45Y50B172	CHANL	KWRI	21 JUN 2010 0230	19.2	4
KC10A	305AMW	6BW45Y50B172	CHANL	KDOV	21 JUN 2010 0612		
KC10A	305AMW	6BW45Y50B172	CHANL	ETAR	22 JUN 2010 1110	16.1	2
KC10A	305AMW	6BW45Y60B173	CHANL	OTBH	22 JUN 2010 1945		

KC10A	305AMW	6BW45Y60B173	CHANL	LEMO	24 JUN 2010 0615		
KC10A	305AMW	6BW45Y50B179	CHANL	KWRI	27 JUN 2010 2330	24.4	2
KC10A	305AMW	6BW45Y50B179	CHANL	KDOV	28 JUN 2010 0215	24.4	2
KC10A	305AMW	6BW45Y50B179	CHANL	ETAR	29 JUN 2010 1000	17.1	
KC10A	305AMW	6BW45Y60B180	CHANL	OTBH	29 JUN 2010 1930		
KC10A	305AMW	XJM104971170	SAAM	KWRI	19 JUN 2010 1845	2.7	
KC10A	305AMW	XAM104971170	SAAM	KTIK	21 JUN 2010 0330		
KC10A	305AMW	XVM104971170	SAAM	EGUL	22 JUN 2010 0830		
KC10A	305AMW	XJM111401181	SAAM	KWRI	30 JUN 2010 0115	0.7	8
KC10A	305AMW	6BW45Y60B180	CHANL	LEMO	01 JUL 2010 0615	0.2	2
KC10A	305AMW	6BW45Y50B186	CHANL	KWRI	05 JUL 2010 0001		
KC10A	305AMW	6BW45Y50B186	CHANL	ETAR	06 JUL 2010 1115	16.9	
KC10A	305AMW	6BW45Y60B187	CHANL	OTBH	06 JUL 2010 2030		
KC10A	305AMW	6JW45F3XE189	CHANL	KWRI	08 JUL 2010 0001	0.2	2
KC10A	305AMW	6BW45F3XE189	CHANL	KNGU	08 JUL 2010 0445	23.1	9
KC10A	305AMW	6BW45Y60B187	CHANL	LEMO	08 JUL 2010 0630		
KC10A	305AMW	6BW45F3XE189	CHANL	LERT	09 JUL 2010 0815	21.4	1
KC10A	305AMW	6BW45F3XE189	CHANL	LICZ	10 JUL 2010 0730	23.4	1
KC10A	305AMW	6BW45F4XE191	CHANL	OBBI	10 JUL 2010 1500	8.7	
KC10A	305AMW	6BW45Y50B193	CHANL	KWRI	12 JUL 2010 0001	25.4	
KC10A	305AMW	6BW45Y50B193	CHANL	KDOV	12 JUL 2010 0430	26.4	
KC10A	305AMW	6BW45Y50B193	CHANL	ETAR	13 JUL 2010 1215	17.4	
KC10A	305AMW	6BW45Y60B194	CHANL	OTBH	13 JUL 2010 2100	11.3	
KC10A	305AMW	6BW45Y60B194	CHANL	LEMO	15 JUL 2010 0530	11.3	
KC10A	305AMW	6JW45F30E197	CHANL	KWRI	16 JUL 2010 0001	0.1	
KC10A	305AMW	6BW45F30E197	CHANL	KNGU	16 JUL 2010 0545	28.5	7
KC10A	305AMW	6BW45F4XE191	CHANL	LERT	17 JUL 2010 0215	17.9	5

KC10A	305AMW	6BW45F30E197	CHANL	LERT	18 JUL 2010 1430	23.9	7
KC10A	305AMW	XBW45Y50B200	CHANL	KWRI	19 JUL 2010 0115	26.5	7
KC10A	305AMW	XBW45Y50B200	CHANL	ETAR	20 JUL 2010 1440		
KC10A	305AMW	XBW45Y60B201	CHANL	OTBH	20 JUL 2010 2245	20.6	2
KC10A	305AMW	6BW45F30E197	CHANL	LICZ	20 JUL 2010 2345	15.7	3
KC10A	305AMW	6BW45F40E199	CHANL	OBBI	21 JUL 2010 0825	11.6	
KC10A	305AMW	6BW45F30E202	CHANL	KNGU	21 JUL 2010 2345	27.1	7
KC10A	305AMW	XBW45Y60B201	CHANL	LEMO	22 JUL 2010 1030		
KC10A	305AMW	6BW45F40E199	CHANL	LICZ	24 JUL 2010 0215	13.1	2
KC10A	305AMW	6BW45F30E202	CHANL	LERT	24 JUL 2010 2000	26	7
KC10A	305AMW	6BW45F40E199	CHANL	LERT	25 JUL 2010 0040	16.7	
KC10A	305AMW	6VW45F40E201	CHANL	KNGU	25 JUL 2010 1105		
KC10A	305AMW	6BW45Y50B207	CHANL	KWRI	26 JUL 2010 0001		
KC10A	305AMW	6BW45F30E202	CHANL	LICZ	26 JUL 2010 0001	13.9	
KC10A	305AMW	6BW45Y50B207	CHANL	KDOV	26 JUL 2010 0600	25.9	3
KC10A	305AMW	6BW45F40E205	CHANL	OBBI	26 JUL 2010 1530	12.2	
KC10A	305AMW	6BW45F40E205	CHANL	LICZ	27 JUL 2010 1635	22.6	6
KC10A	305AMW	6BW45Y50B207	CHANL	ETAR	28 JUL 2010 0945	29.1	5
KC10A	305AMW	6BW45F40E205	CHANL	LERT	28 JUL 2010 1645	24.9	7
KC10A	305AMW	6BW45Y60B208	CHANL	OTBH	28 JUL 2010 1935		
KC10A	305AMW	6VW45F40E207	CHANL	KNGU	29 JUL 2010 0415	0.5	
KC10A	305AMW	XJW45F30E211	CHANL	KWRI	30 JUL 2010 0001	0.1	1
KC10A	305AMW	XJW45F30E211	CHANL	KWRI	30 JUL 2010 0200	0.1	1
KC10A	305AMW	XBW45F30E211	CHANL	KNGU	30 JUL 2010 1145		
KC10A	305AMW	XBW45F30E211	CHANL	KWRI	31 JUL 2010 1200		
KC10A	305AMW	XBW45F30E211	CHANL	KNGU	31 JUL 2010 1600	37.8	8
KC10A	305AMW	XAM111401181	SAAM	EGUL	01 JUL 2010 1200		

KC10A	305AMW	XVM111401181	SAAM	OTBH	01 JUL 2010 2147		
KC10A	305AMW	XVM111401181	SAAM	LTAG	03 JUL 2010 0730	10.4	62
KC10A	305AMW	XVM111401181	SAAM	KBGR	03 JUL 2010 2140		
KC10A	305AMW	XBW45F30E211	CHANL	LERT	01 AUG 2010 1840	36.7	9
KC10A	305AMW	XBW45F30E211	CHANL	LICZ	02 AUG 2010 2025	29.6	6
KC10A	305AMW	6BW45Y60B208	CHANL	LEMO	02 AUG 2010 2030		
KC10A	305AMW	XBW45F40E213	CHANL	OBBI	03 AUG 2010 0335	6.9	
KC10A	305AMW	XBW45F40E213	CHANL	LICZ	04 AUG 2010 0130	18.2	10
KC10A	305AMW	6BW45Y50B214	CHANL	KWRI	05 AUG 2010 0230	24.9	1
KC10A	305AMW	XBW45F40E213	CHANL	LERT	05 AUG 2010 0400	23.7	8
KC10A	305AMW	6BW45Y50B214	CHANL	KDOV	05 AUG 2010 0453	24.9	1
KC10A	305AMW	XVW45F40E216	CHANL	KNGU	05 AUG 2010 1300		
KC10A	305AMW	XJW45F30E218	CHANL	KWRI	06 AUG 2010 0400		
KC10A	305AMW	XBW45F30E218	CHANL	KNGU	06 AUG 2010 0730	16.2	10
KC10A	305AMW	6BW45Y50B214	CHANL	ETAR	06 AUG 2010 1430	25.1	3
KC10A	305AMW	6BW45Y60B215	CHANL	OTBH	07 AUG 2010 0100	11.4	
KC10A	305AMW	XBW45F30E218	CHANL	LERT	07 AUG 2010 0850		
KC10A	305AMW	XBW45F30E218	CHANL	LICZ	08 AUG 2010 0545	20.1	1
KC10A	305AMW	6BW45Y60B215	CHANL	LEMO	08 AUG 2010 1015	11.8	4
KC10A	305AMW	XBW45F40E220	CHANL	OBBI	08 AUG 2010 1115	0.6	1
KC10A	305AMW	XBW45Y50B221	CHANL	KWRI	09 AUG 2010 0015	26.3	7
KC10A	305AMW	XBW45F40E220	CHANL	LICZ	09 AUG 2010 1130	7.4	10
KC10A	305AMW	XBW45F40E220	CHANL	LERT	10 AUG 2010 0925	17.7	8
KC10A	305AMW	XBW45Y50B221	CHANL	ETAR	10 AUG 2010 1215	19.8	
KC10A	305AMW	XVW45F40E222	CHANL	KNGU	10 AUG 2010 1830		
KC10A	305AMW	XBW45Y60B222	CHANL	OTBH	10 AUG 2010 2030		
KC10A	305AMW	XBW45Y60B222	CHANL	LEMO	12 AUG 2010 0800	0.4	3

KC10A	305AMW	XBW45Y50B228	CHANL	KWRI	17 AUG 2010 2359	25.8	7
KC10A	305AMW	XBW45Y50B228	CHANL	ETAR	19 AUG 2010 1915	20.6	
KC10A	305AMW	XBW45Y60B229	CHANL	OTBH	20 AUG 2010 0511	13.6	
KC10A	305AMW	XBW45Y60B229	CHANL	LERT	21 AUG 2010 0800	13.6	
KC10A	305AMW	6BW45R30B235	CHANL	KWRI	23 AUG 2010 0130	14.6	
KC10A	305AMW	6BW45R30B235	CHANL	KDOV	23 AUG 2010 0515	14.8	3
KC10A	305AMW	6BW45R30B235	CHANL	EGUN	23 AUG 2010 1430	11.6	5
KC10A	305AMW	6BW45R40B236	CHANL	ETAR	24 AUG 2010 1715	3.6	5
KC10A	305AMW	6BW45R40B236	CHANL	KDOV	26 AUG 2010 1830		
KC10A	305AMW	XJW45F30B291	CHANL	KWRI	18 OCT 2010 0015		
KC10A	305AMW	XBW45F30B291	CHANL	KNGU	18 OCT 2010 0400	23.7	6
KC10A	305AMW	XBW45F30B291	CHANL	LERT	19 OCT 2010 0530	22.2	2
KC10A	305AMW	XBW45F30B291	CHANL	LICZ	20 OCT 2010 0330	18.1	
KC10A	305AMW	XBW45F40B293	CHANL	OBBI	20 OCT 2010 1215	1.4	
KC10A	305AMW	XBW45F40B293	CHANL	LICZ	21 OCT 2010 1415	19.6	7
KC10A	305AMW	XBW45F40B293	CHANL	LERT	22 OCT 2010 1000	1.5	5
KC10A	305AMW	XVW45F40B295	CHANL	KNGU	22 OCT 2010 2110	0.6	6
KC10A	305AMW	XJM171171290	SAAM	KWRI	17 OCT 2010 1815		
KC10A	305AMW	XAM171171290	SAAM	KLFI	18 OCT 2010 1600		
KC10A	305AMW	XAM171171290	SAAM	KVAD	19 OCT 2010 1400		
KC10A	305AMW	XAM171171290	SAAM	KNFW	19 OCT 2010 2250		
KC10A	305AMW	XVM171171290	SAAM	KLFI	20 OCT 2010 1630		

Appendix D: Blue Dart Submission Form

Blue Dart Submission Form

First Name: William Last Name: Triche

Rank (Military, AD, etc.): Major

Position/Title: Student, ASAM

Phone Number: 650-7744 E-mail: william.triche@us.af.mil

School/Organization: AFIT/ASAM

Status: ☒ Student ☐ Faculty ☐ Staff ☐ Other

Optimal Media Outlet (optional): _____

Optimal Time of Publication (optional): _____

{e.g., anniversary of a specific event, etc.}

General Category / Classification:

<input type="checkbox"/> core values	<input type="checkbox"/> command	<input type="checkbox"/> strategy
<input type="checkbox"/> war on terror	<input type="checkbox"/> culture & language	<input type="checkbox"/> leadership & ethics
<input type="checkbox"/> warfighting	<input type="checkbox"/> international security	<input type="checkbox"/> doctrine

☒ other (specify):

Funding Policy Review

Suggested Headline: KC-10 Funding

{e.g., I Was Just Following Orders}

Keywords: KC-10, Transportation Working Capital Fund, Airlift Cargo, funding

{e.g., leadership, ethics, Nuremburg, Giessen, intimidation, chain of command}

Blue Dart Text —Limit to approximately 750 words:

This research paper explains the differences of funding and reimbursement between TWCF and Operations and Maintenance to AMC. Strategic airlift aircraft and dual role aircraft are utilized to move cargo but are reimbursed using different processes and value streams back to the unit providing the cargo airlift.

Dual role aircraft, such as the KC-10, are reimbursed to the Major Command and the Major Command divides the reimbursement funds throughout the Wings. However, strategic airlift aircraft are TWCF reimbursed directly back to the Wing that flew the mission. The more airlift missions the strategic airlifters perform, the more they are reimbursed, balancing the cost to operate. Dual role aircraft are resourced by an Operations and Maintenance budget. These tasked units receive a small return on investment as compared to the strategic airlift community.

Funding for these capabilities is provided through the PPBE process performed by the Department of Defense. This process provides the ways and means to resource the support provided to our Department of Defense and international partners. Some Air Force wings have dual role mission aircraft. Wings are provided an Operational and Maintenance or TWCF budget to operate and support the assigned Designed Operational Capability, or mission. How aircraft are funded is based on who "owns and financed" the aircraft. Operational and Maintenance funding is used by dual role wings for operating and support cost of the assigned mission. Dual role wings operate on a budget approved by congress and must project an amount of planned flying hours required to maintain training and assigned missions with the primary mission being aerial refueling and the secondary mission being airlift.

Research Question: **How should Air Mobility Command fund dual role KC-10 aircraft performing airlift missions to meet United States Transportation Command requirements?**

“A fee for service.”

To focus this study, four specific investigative questions were developed and must be researched and answered.

1. Should AMC fund dual role aircraft performing airlift missions the same as single role aircraft performing airlift missions?
2. Are two different payment processes used for airlift mission reimbursement fairly distributed?
3. Does the TWCF reimbursement get disseminated back to dual role units performing the airlift mission for each respective Wing?
4. Should TWCF be used for dual role aircraft performing airlift missions, providing a cost apportionment by AMC in support of USTC, used in support of KC sustainment?

The research focused on the airlift performance of dual role KC-10 aircraft. The mission types that met these parameters best are the channel and Special Assignment Airlift Missions. These airlift missions accounted for 4.28% of the total KC-10 hours flown and funded by Air Mobility Command as requested from United States Transportation Command. Special Assignment Airlift Missions accounted for 18% of the KC-10 airlift missions and channel mission accounted for 82% of the KC-10 airlift missions.

Course of Action and Recommendations

As the missions of refueling decreases, the airlift mission will increase.

Recommendations and course of actions are discussed.

COA 1: Common Pricing and Payment for Cargo – Fee for Service

Recommendation: Reimburse the tasked unit with common payment rules regardless of acquisition of aircraft type. The customer has the option to pay for the type of service.

COA 2: Funding Process Awareness

Recommendation: Provide media and storyboards outlining the process to all users and support agencies with contact numbers for further explanation.

COA 3: Streamline Laws and Regulatory Requirements

Recommendation: Develop working groups to gather policy directives into one location with a guide that can direct users for easy use and reference.

COA 4: Implement Budget Saving Incentives for On-time Mission Success

Recommendation: Develop performance based policy that will provide price savings per on-time performance.

COA 5: Develop Efficient Budgeting Incentives

Recommendation: Review and adjust policy to offer a portion of under-budget success back to the unit for discretionary spending and with no following year budget decrease disincentive.

Conclusion

As war requirements for aerial refueling decreases, KC-10 and KC-X aircraft will be used in airlift mission areas. The airlift portions account for 5% of all missions and is projected to increase. Better understanding of the Operations and Maintenance and TWCF finance, disbursement and reimbursement will clarify the operational increases among the KC-10 operating and maintenance community as well as the customers. Clear and easily understood pricing to customers for all mobility airlift aircraft can assist and facilitate competitive and continued business.

Appendix E: AFIT Quad Chart

Dual Role Airlift, KC-10 Fee for Service?^{t1}

Description

- Funding differences between TWCF and O&M for KC-10 airlift operations
- Shows that 5% of overall missions are pure airlift
- Reviews TWCF and AMC reimbursement policy
- Reviews current TWCF and AMC airlift charge rates
- Reviews FM processes for budgeting
- Offers Course of Action and Recommendations

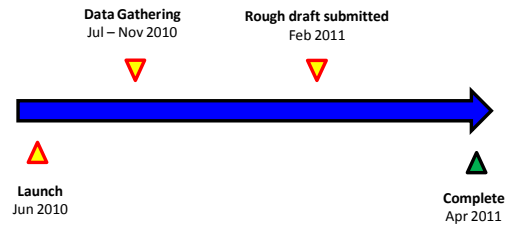
Expected Benefits / Opportunities

- COA 1: Common Pricing/Payment for Cargo
Rec: Common payment rules, customer pays for service
- COA 2: Funding Process Awareness
Rec: Provide media/storyboards outlining the process
- COA 3: Streamline Laws and Regulatory Requirements
Rec: Gather policy into one location with a guide
- COA 4: Incentives for On-time Mission Success
Rec: Performance based savings for performance
- COA 5: Efficient Budgeting Incentives
Rec: Incentives for under-budget success, no disincentive decrease budget for next year

Status

- New effort—no previous studies
- Conceptual review of new funding policy to a Fee for Service exploration
 - TSgt Hardy, Analyst from 305 MXG
 - Great support from AMC/FM
- Explores alternative policy for budget execution

Milestones



Research Advisor: Dr. Bill Cunningham

Research Sponsor: Col Brown AMC/FM

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Vita

Major Triche entered the Air Force on 2 August 1985. He was enlisted from 1985 to 1999. He served as a conventional and nuclear munitions maintenance technician, back shop maintenance non-commissioned officer in-charge and flight line expeditor with assignments to Plattsburgh, New York; Incirlik AB, Republic of Turkey; and Luke AFB, Arizona. He was commission 1999 through Officer Training School. His first commissioned assignment was to McConnell AFB, Kansas, as Sortie Generation Flight commander. He was then assigned to 725th Air Mobility Squadron, Rota, Spain. His staff tour was at Air Mobility Command where he was assigned to various positions in the Tanker/Airlift Control Center to include Global Readiness, Global Command and Control and the Tanker/Airlift Control Center Business Center and Headquarters Air Mobility Command Inspector General, staff.

He deployed in support of Operation Enduring Freedom, Operation Iraqi Freedom, Operation Provide Comfort, Operation Just Cause, Operation Provide Hope, and Operation Restore Hope. Major Triche is married to the former Anna Catherine Chaves and has three daughters; Briana, Paulina and Sophia. Upon graduation from Advanced Studies of Air Mobility he will assume command of North Atlantic Treaty Organization, Early Warning E-3 Airborne Warning and Control System, Maintenance Squadron, Geilenkirchen, Germany.

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